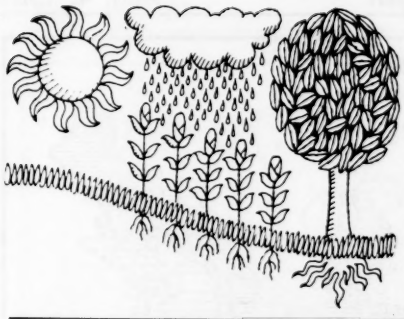


WEEKLY WEATHER AND CROP BULLETIN

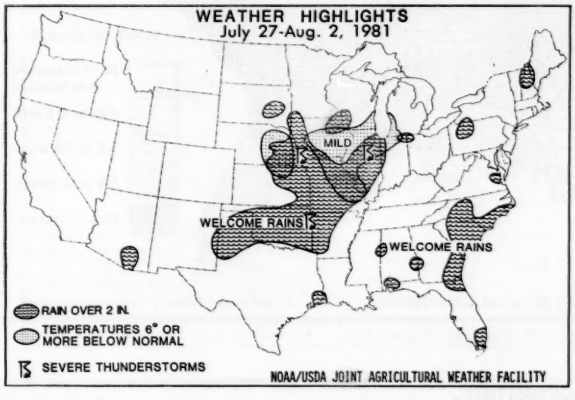
U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration, National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
Statistical Reporting Service and World Agricultural Outlook Board

Volume 68, No. 31 WASHINGTON, D.C. Aug. 4, 1981

National Weather Summary

July 27-Aug. 2, 1981



HIGHLIGHTS: Rain in the southeastern United States helped but much more moisture is needed. Moderate to heavy rain in Oklahoma and western Iowa fell on dry soils and so was needed, however, some of the thunderstorms were accompanied by hail and high wind. Temperatures averaged 5 to 8° cooler than normal across much of the Corn Belt.

MONDAY...Thunderstorms produced widespread showers from Texas to North Dakota and from Colorado to Pennsylvania and the Carolinas. The most severe storms occurred from central Oklahoma to northeastern Iowa. Nearly 6 inches of rain fell at Oklahoma City and continued rain in eastern Kansas and northwestern Missouri caused streams to rise and lowland flooding. It was a cool morning over the Great Lakes region where temperatures dropped into the forties. In contrast, much of the South reached the upper nineties at mid-afternoon.

TUESDAY...The pattern of showers and thunderstorms moved eastward. The heaviest rain occurred from southeastern New Mexico to the Ohio Valley and then to the mid-Atlantic States and New England. Scattered thundershowers fell in Montana and the South Central gulf States. Very cool weather continued behind the line of showers. Some record low temperatures were reached in Iowa and the Great Lakes region.

WEDNESDAY...The cold front lingered in New England and spread showers and thunderstorms down the east coast and across the South to Oklahoma and southern New Mexico and Arizona. Much needed rain fell in Alabama and Georgia. Unseasonably cool temperatures lingered over the upper half of the mississippi Valley and the Great Lakes region.

THURSDAY...Thunderstorms continued to wet the Southeast and some very heavy showers caused local flooding in northeastern Oklahoma and northwestern Arkansas. Lighter showers reached northward through the Plains and into Canada. Cool weather spread through the Northeast. Temperatures warmed in the western Plains. Hot weather pushed southward to the gulf coast.

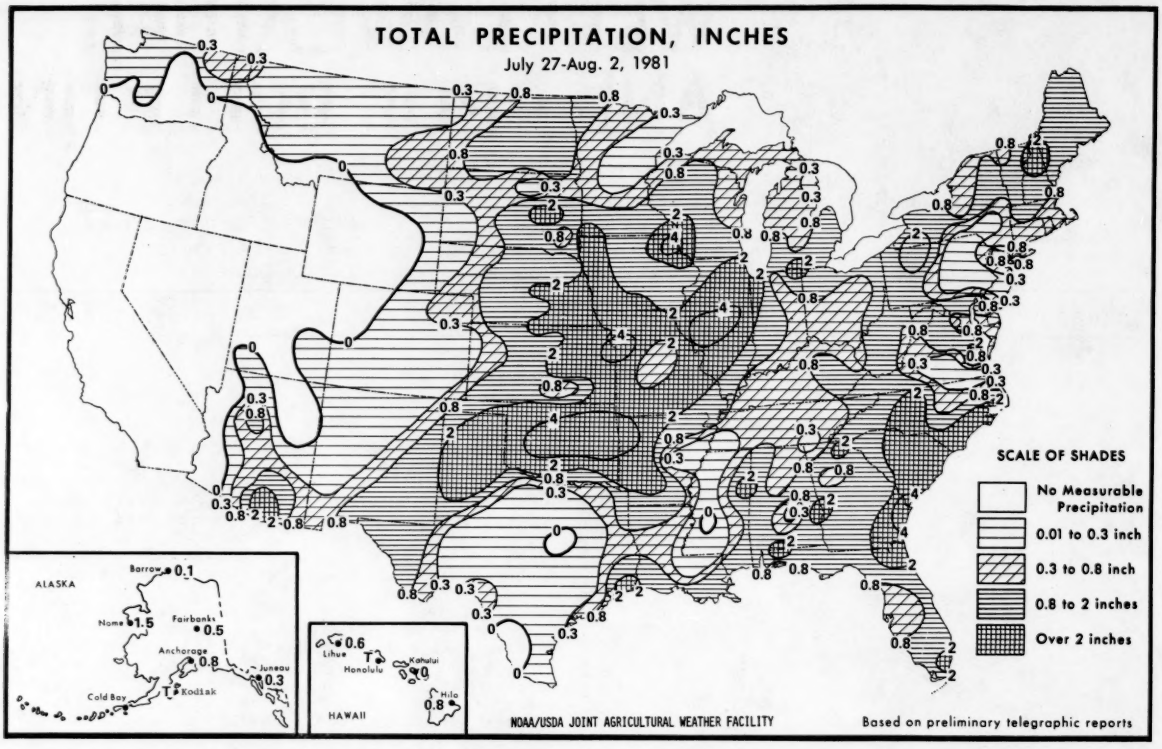
FRIDAY...More rain fell in the Southeast. Thunderstorms, some severe, were scattered from eastern Texas to the Dakotas and Minnesota and through the southern Rockies and Plateau. Cool weather spread throughout the East but warm temperatures dominated the southern Plains, Plateau and Southwest.

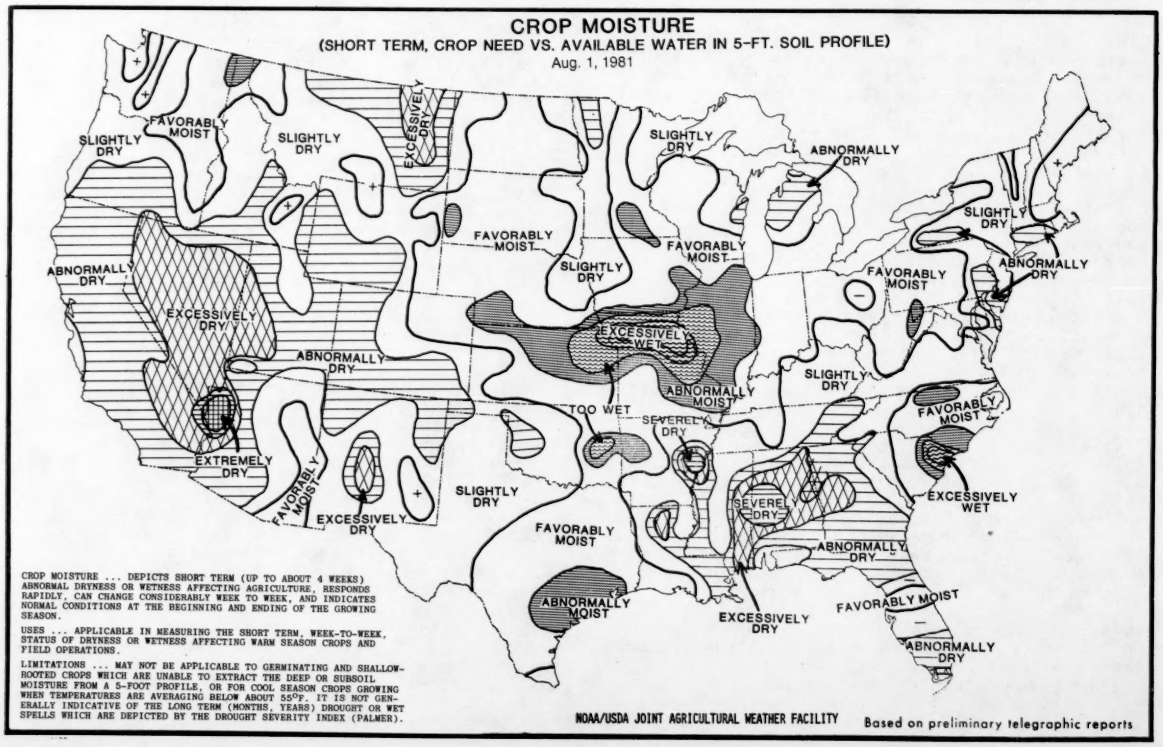
SATURDAY...Heavy rain from thunderstorms covered northeastern Kansas, eastern Nebraska, western Iowa and into Minnesota, and Wisconsin. Coverage was nearly complete in these areas and some flooding deluges occurred. Thunderstorms were scattered throughout the central and northern Plains, southern Rockies and Southeast. The rain areas in Nebraska, Iowa, and Georgia were in much need of moisture.

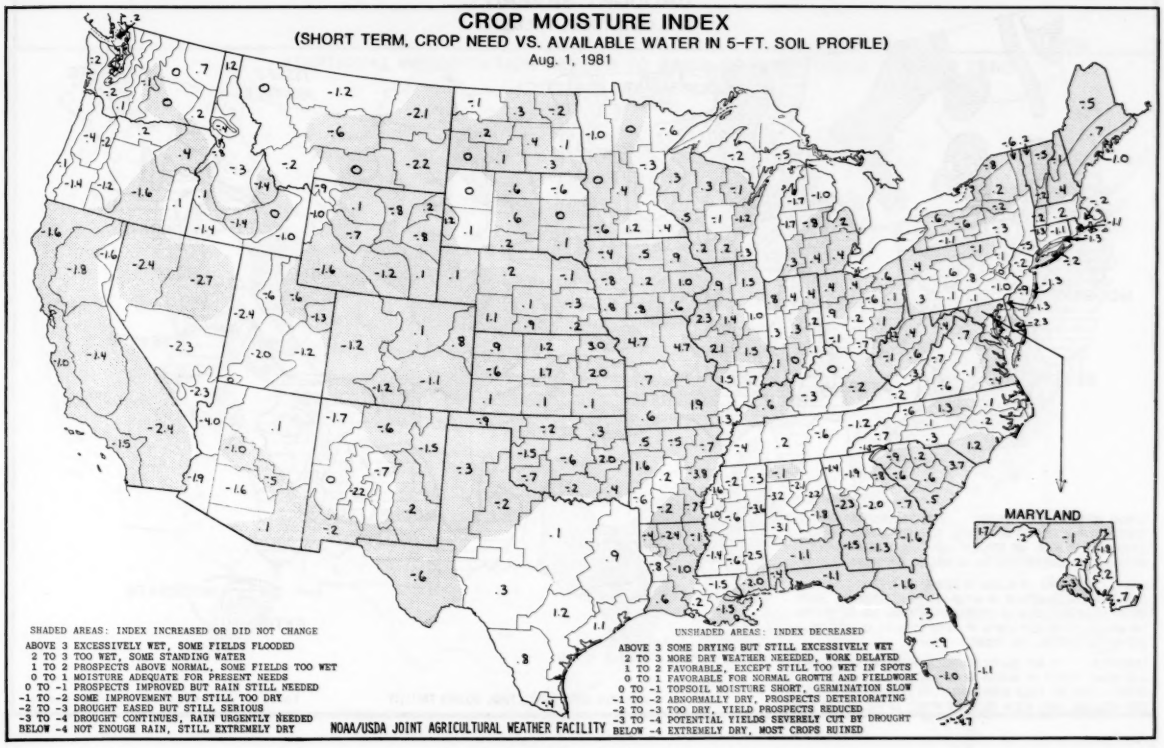
SUNDAY...Some heavy thunderstorms hit along a line from northwestern Arkansas to Chicago. Springfield, Illinois, measured over 4 inches. Severe thunderstorms accompanied by high wind and large hail raked the northern Plains from eastern Montana into northern Minnesota. Scattered thunderstorms hit the southeastern States and southern high Plains.

In This Issue

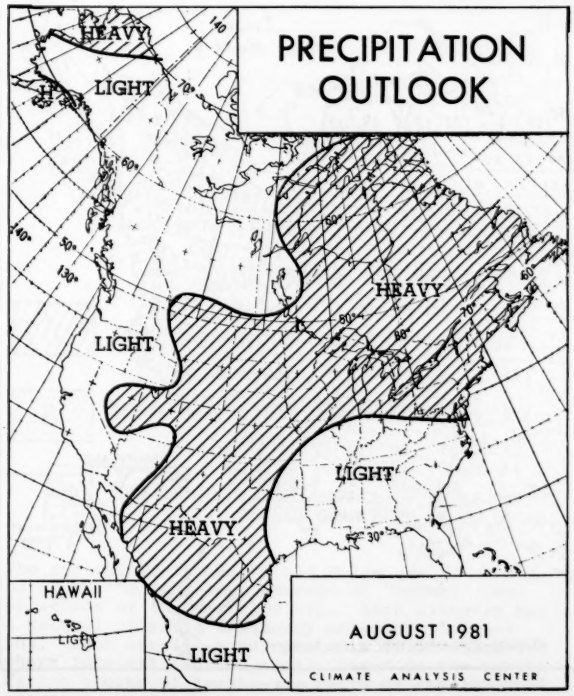
	Page
National Weather Summary	1
Precipitation & Crop Moisture	2
Crop Moisture Index & August Weather Outlook	3
Drought Severity & Drought Severity Index	4
Precipitation Needed to End Drought & 90-Day Outlook	5
Temperature & Departure	6
Growing Degree Days & Crop Development	7
Pan Evaporation (Map) & (Article) Pan Evaporation: Guide to Estimating Water Requirements of Corn	8
Weather Data for Selected Cities	11
Cooling Degree Days	14
National Agricultural Summary	15
Crop Progress	16
State Summaries of Weather & Agriculture	16
International Weather & Crop Summary	23
Dry Hot Weather Affects Parts of USSR	26
Eurasia Outlook for August & Subscription Information	28

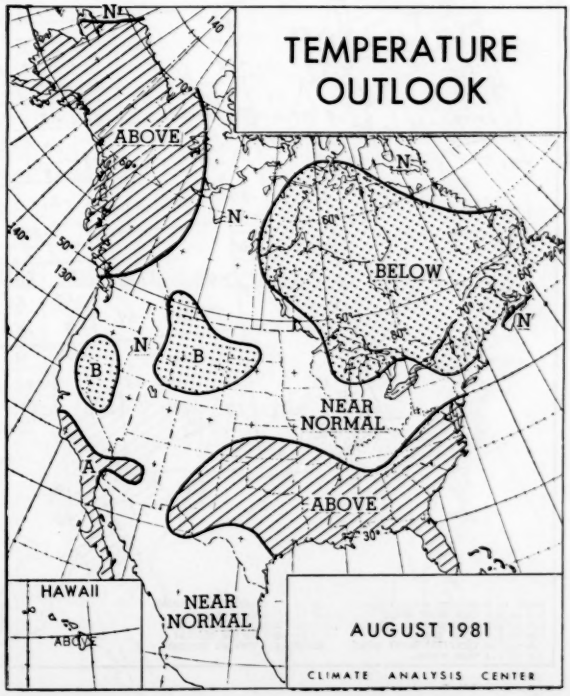

TOTAL PRECIPITATION, INCHES
July 27-Aug. 2, 1981
SCALE OF SHADES
No Measurable Precipitation
0.01 to 0.3 inch
0.3 to 0.8 inch
0.8 to 2 inches
Over 2 inches
ALASKA
Barrow 0.1
Nome 1.5
Fairbanks 0.5
Anchorage 0.8
Juneau 0.3
Cold Bay
Kodiak
HAWAII
Lihue 0.6
Honolulu
Kahului 0
Hilo 0.8
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary telegraphic reports

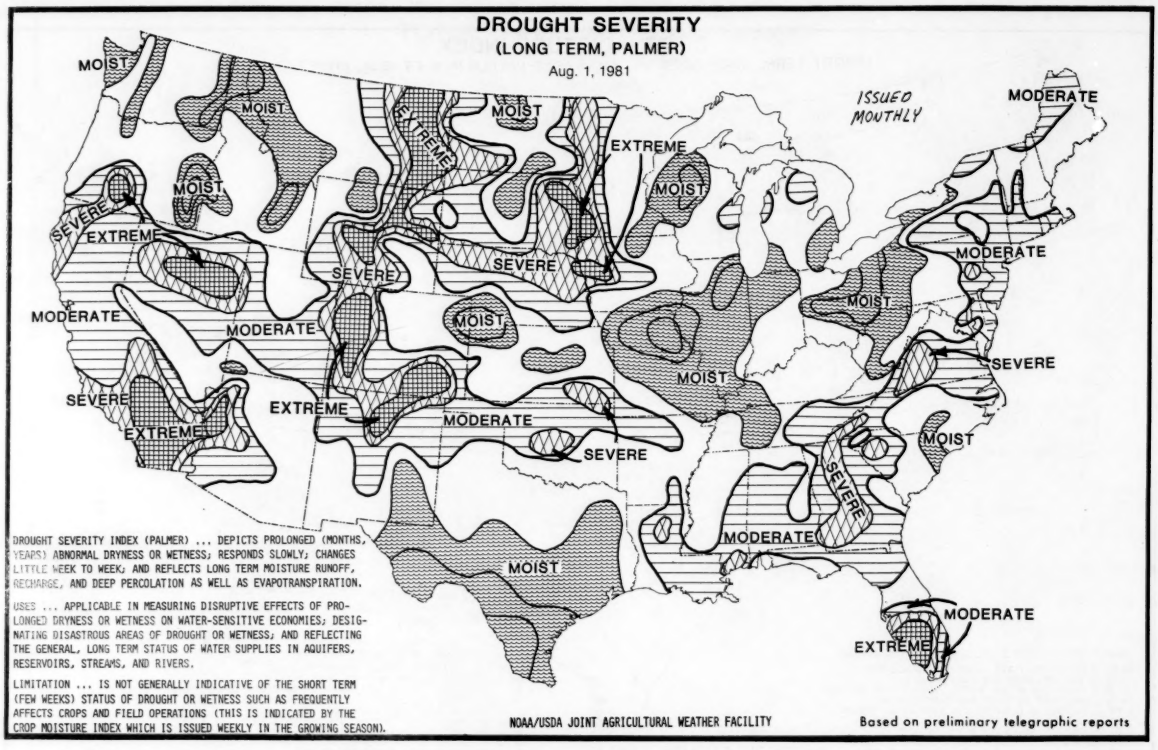

CROP MOISTURE
(SHORT TERM, CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE)
Aug. 1, 1981
SLIGHTLY DRY
FAVORABLY MOIST
EXCESSIVELY DRY
ABNORMALLY DRY
EXTREMELY DRY
EXCESSIVELY WET
TOO WET
ABNORMALLY MOIST
SEVERELY DRY
SEVERE DRY
CROP MOISTURE ... DEPICTS SHORT TERM (UP TO ABOUT 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE, RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK, AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND ENDING OF THE GROWING SEASON.
USES ... APPLICABLE IN MEASURING THE SHORT TERM, WEEK-TO-WEEK, STATUS OF DRYNESS OR WETNESS AFFECTING WARM SEASON CROPS AND FIELD OPERATIONS.
LIMITATIONS ... MAY NOT BE APPLICABLE TO GERMINATING AND SHALLOW-ROOTED CROPS WHICH ARE UNABLE TO EXTRACT THE DEEP OR SUBSOIL MOISTURE FROM A 5-FOOT PROFILE, OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING BELOW ABOUT 55°F. IT IS NOT GENERALLY INDICATIVE OF THE LONG TERM (MONTHS, YEARS) DROUGHT OR WET SPELLS WHICH ARE DEPICTED BY THE DROUGHT SEVERITY INDEX (PALMER).
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary telegraphic reports

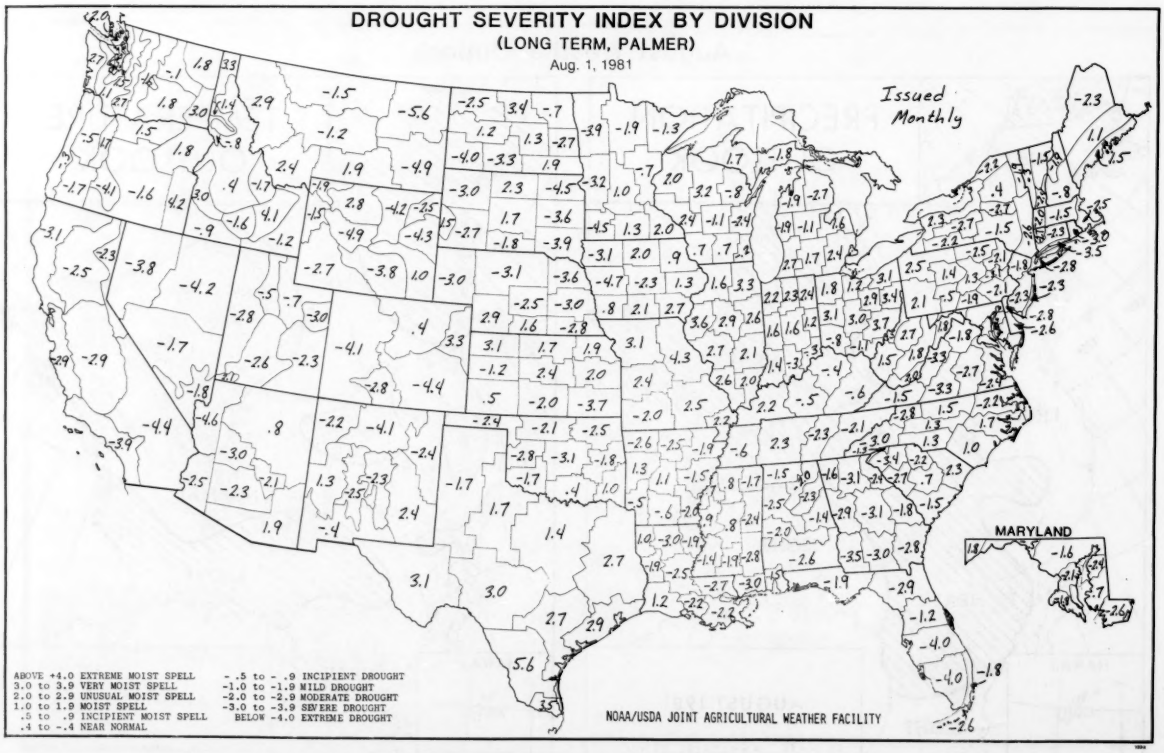

CROP MOISTURE INDEX
(SHORT TERM, CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE)
Aug. 1, 1981
MARYLAND
SHADED AREAS: INDEX INCREASED OR DID NOT CHANGE
ABOVE 3 EXCESSIVELY WET, SOME FIELDS FLOODED
2 TO 3 TOO WET, SOME STANDING WATER
1 TO 2 PROSPECTS ABOVE NORMAL, SOME FIELDS TOO WET
0 TO 1 MOISTURE ADEQUATE FOR PRESENT NEEDS
0 TO -1 PROSPECTS IMPROVED BUT RAIN STILL NEEDED
-1 TO -2 SOME IMPROVEMENT BUT STILL TOO DRY
-2 TO -3 DROUGHT EASED BUT STILL SERIOUS
-3 TO -4 DROUGHT CONTINUES, RAIN URGENTLY NEEDED
BELOW -4 NOT ENOUGH RAIN, STILL EXTREMELY DRY
UNSHADED AREAS: INDEX DECREASED
ABOVE 3 SOME DRYING BUT STILL EXCESSIVELY WET
2 TO 3 MORE DRY WEATHER NEEEDED, WORK DELAYED
1 TO 2 FAVORABLE, EXCEPT STILL TOO WET IN SPOTS
0 TO 1 FAVORABLE FOR NORMAL GROWTH AND FIELDWORK
0 TO -1 TOPSOIL MOISTURE SHORT, GERMINATION SLOW
-1 TO -2 ABNORMALLY DRY, PROSPECTS DETERIORATING
-2 TO -3 TOO DRY, YIELD PROSPECTS REDUCED
-3 TO -4 POTENTIAL YIELDS SEVERELY CUT BY DROUGHT
BELOW -4 EXTREMELY DRY, MOST CROPS RUINED
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

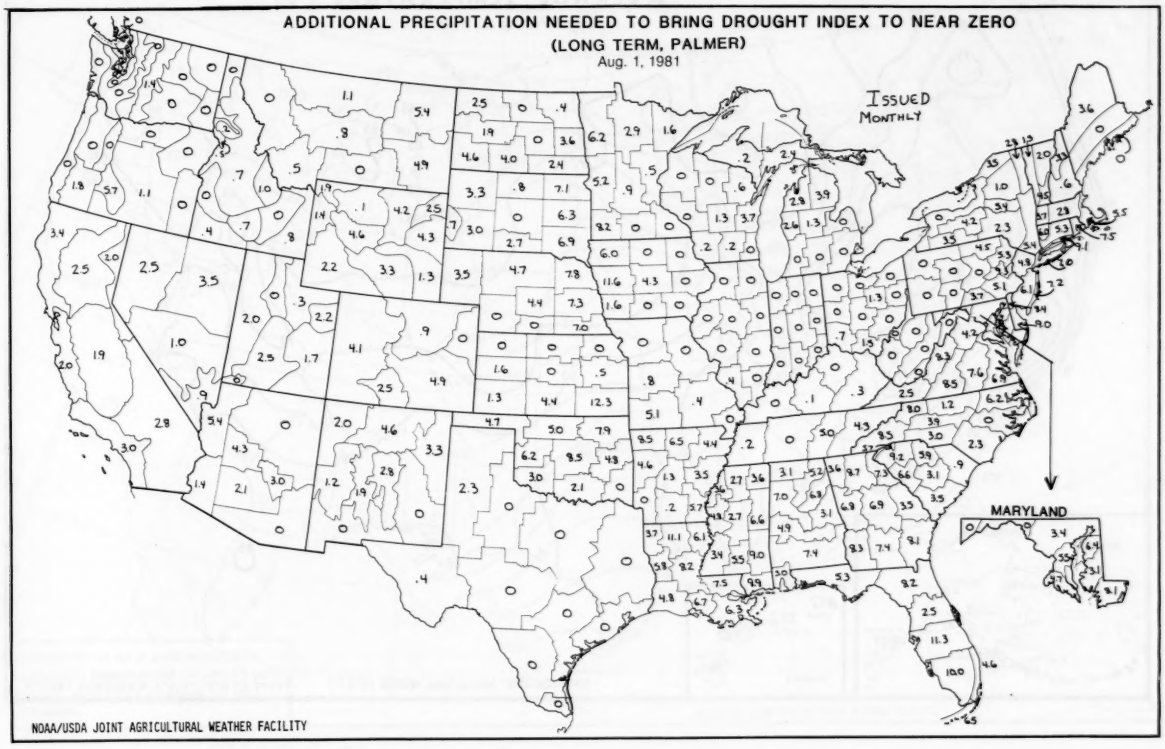
August Weather Outlook






DROUGHT SEVERITY
(LONG TERM, PALMER)
Aug. 1, 1981
ISSUED MONTHLY
MOIST
MODERATE
SEVERE
EXTREME
DROUGHT SEVERITY INDEX (PALMER) ... DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS; RESPONDS SLOWLY; CHANGES LITTLE WEEK TO WEEK; AND REFLECTS LONG TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION AS WELL AS EVAPOTRANSPIRATION.
USES ... APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER-SENSITIVE ECONOMIES; DESIGNATING DISASTROUS AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL, LONG TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS, STREAMS, AND RIVERS.
LIMITATION ... IS NOT GENERALLY INDICATIVE OF THE SHORT TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX WHICH IS ISSUED WEEKLY IN THE GROWING SEASON).
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary telegraphic reports


DROUGHT SEVERITY INDEX BY DIVISION
(LONG TERM, PALMER)
Aug. 1, 1981
Issued Monthly
MARYLAND
ABOVE +4.0 EXTREME MOIST SPELL
3.0 to 3.9 VERY MOIST SPELL
2.0 to 2.9 UNUSUAL MOIST SPELL
1.0 to 1.9 MOIST SPELL
.5 to .9 INCIPIENT MOIST SPELL
.4 to -.4 NEAR NORMAL
- .5 to - .9 INCIPIENT DROUGHT
-1.0 to -1.9 MILD DROUGHT
-2.0 to -2.9 MODERATE DROUGHT
-3.0 to -3.9 SEVERE DROUGHT
BELOW -4.0 EXTREME DROUGHT
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

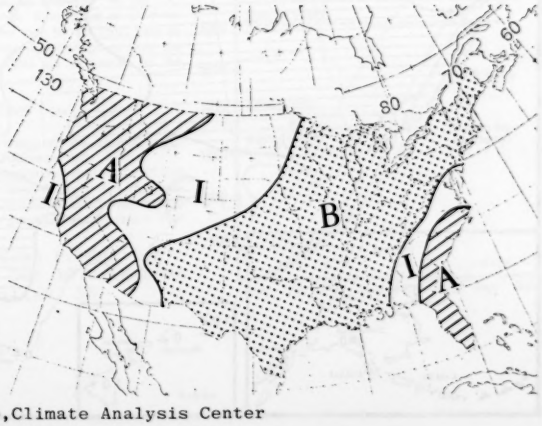

ADDITIONAL PRECIPITATION NEEDED TO BRING DROUGHT INDEX TO NEAR ZERO
(LONG TERM, PALMER)
Aug. 1, 1981
ISSUED MONTHLY
MARYLAND
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

OUTLOOK FOR 90 DAY AVERAGE TEMPERATURES AUGUST THROUGH OCTOBER 1981

A — ABOVE NORMAL, 60% CHANCE OF OCCURRENCE

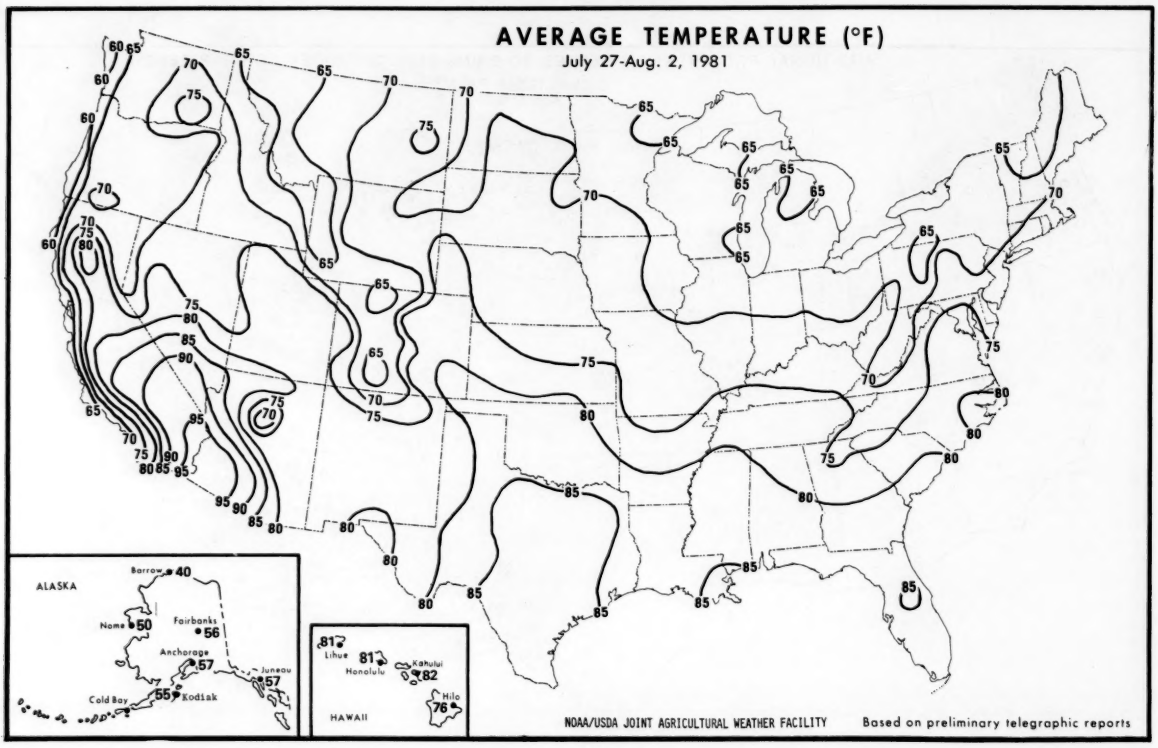
B — BELOW NORMAL, 60% CHANCE OF OCCURRENCE

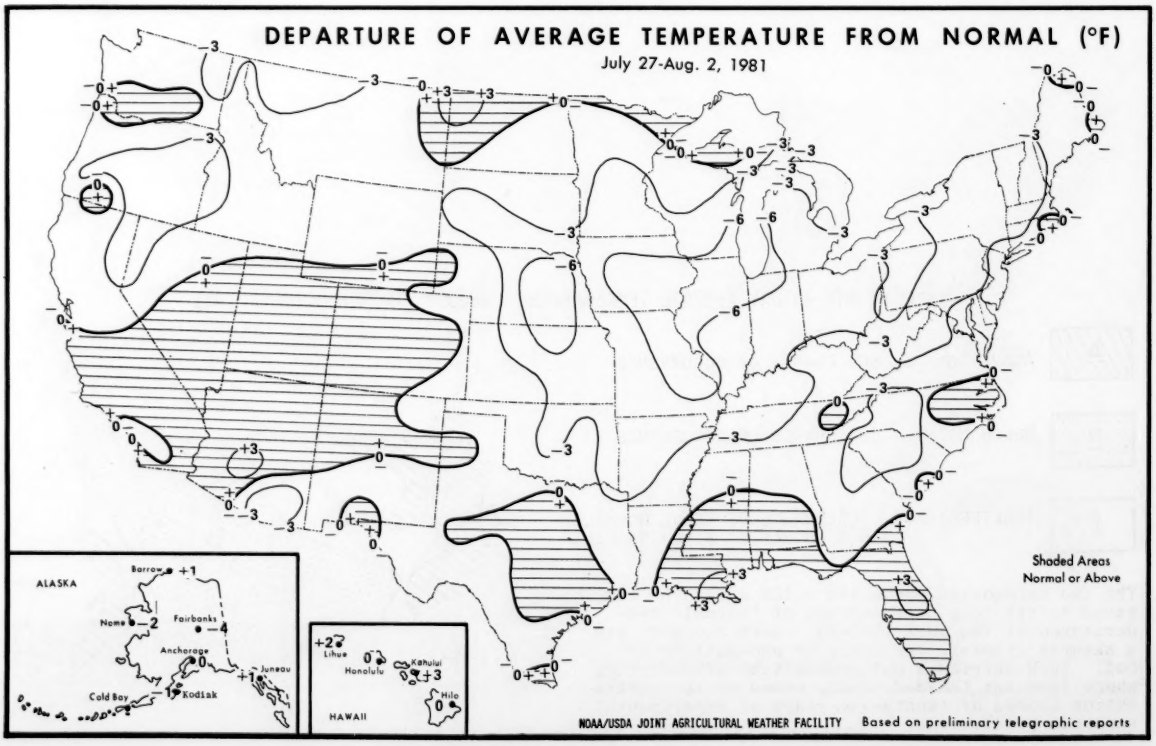
I — INDETERMINATE, 50% CHANCE OF ABOVE NORMAL
50% CHANCE OF BELOW NORMAL

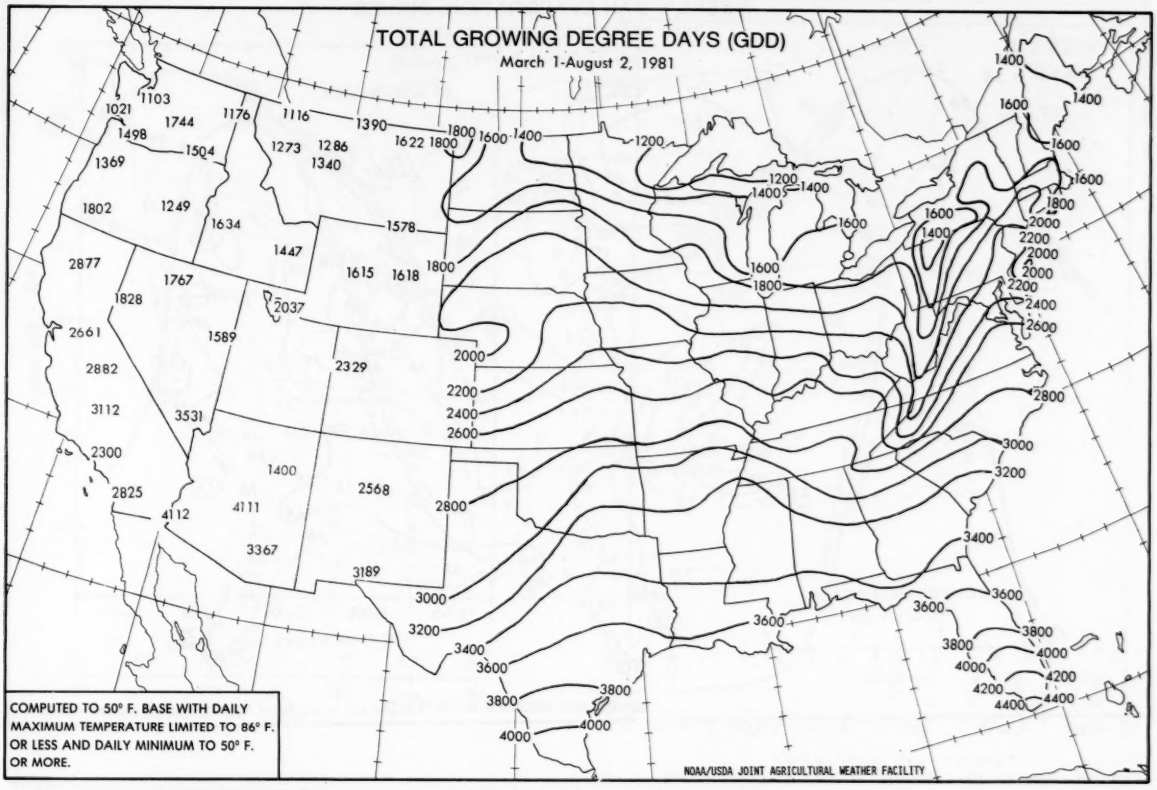


The two categories Above and Below are to be compared to the long-term average or "normal" temperatures of the year 1941-70. Each category has a natural climatic frequency or probability of 50%. Each carries a 60% probability of occurring where forecast (shaded area), based on the verification scores of twenty-two years of experimental seasonal predictions.

NOAA, National Weather Service, Climate Analysis Center


AVERAGE TEMPERATURE (°F)
July 27-Aug. 2, 1981
ALASKA
Barrow 40
Nome 50
Fairbanks 56
Anchorage 57
Juneau 57
Cold Bay 55
Kodiak
HAWAII
Lihue 81
Honolulu 81
Kahului 82
Hilo 76
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary telegraphic reports


DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)
July 27-Aug. 2, 1981
ALASKA
Barrow +1
Nome −2
Fairbanks −4
Anchorage 0
Juneau +1
Cold Bay −1
Kodiak
HAWAII
Lihue +2
Honolulu 0
Kahului +3
Hilo 0
Shaded Areas
Normal or Above
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary telegraphic reports


TOTAL GROWING DEGREE DAYS (GDD)
March 1-August 2, 1981
COMPUTED TO 50° F. BASE WITH DAILY MAXIMUM TEMPERATURE LIMITED TO 86° F. OR LESS AND DAILY MINIMUM TO 50° F. OR MORE.
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

MAP # 8 Pg 7 34?

Use of Growing Degree Units in Corn Production

For years, the practice has been to label corn maturity in days. A 135 day variety would presumedly reach maturity 135 days after it was planted. This system does not take into account the complicated physiological processes that control the growth and development of corn. The number of days required to reach maturity depends on the location of the planting, and the weather that the plant is subjected to in a particular growing season. In most years, the period will be more or less than 135 days. It is hard to decide which maturity to plant to achieve maximum production. A delayed planting might not provide the required number of days for your variety to mature.

Each day does not contribute equally to the growth of plants. Growth is faster during the warm season than it is in cold weather. On the other hand, summer temperature can be too high for optimum growth. Although other factors than temperature enter into determining the rate of growth, there is a growing acceptance among seed producers to use the temperature based Growing Degree Units (GDU) concept to express maturity. There have been many of these "heat-unit" systems devised over the years. The one currently in use for corn is that proposed by the Environmental Data Service of the National Oceanic and Atmospheric Administration (Formerly U.S. Weather Bureau).[1]

[1] In this system, Growing Degree Units are calculated by subtracting a base temperature of 50° (F) from the average of the maximum and minimum temperatures for the day. Corn doesn't grow much at temperatures below 50°. As the temperature rises, corn grows faster if moisture is plentiful. However, at a temperature higher than 86° the roots have increasing difficulty taking in water fast enough to keep the plant growing at full speed. GDU are calculated by the following equation.

$$GDU = \frac{\text{Max Temp.} + \text{Min Temp.}}{2} - 50°$$

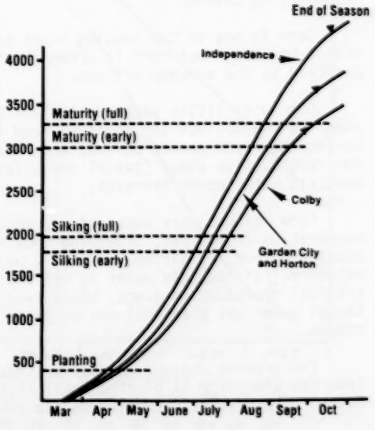
NOTE: Minimum temperatures below 50° are counted as 50° and temperatures above 86° are counted as 86°.

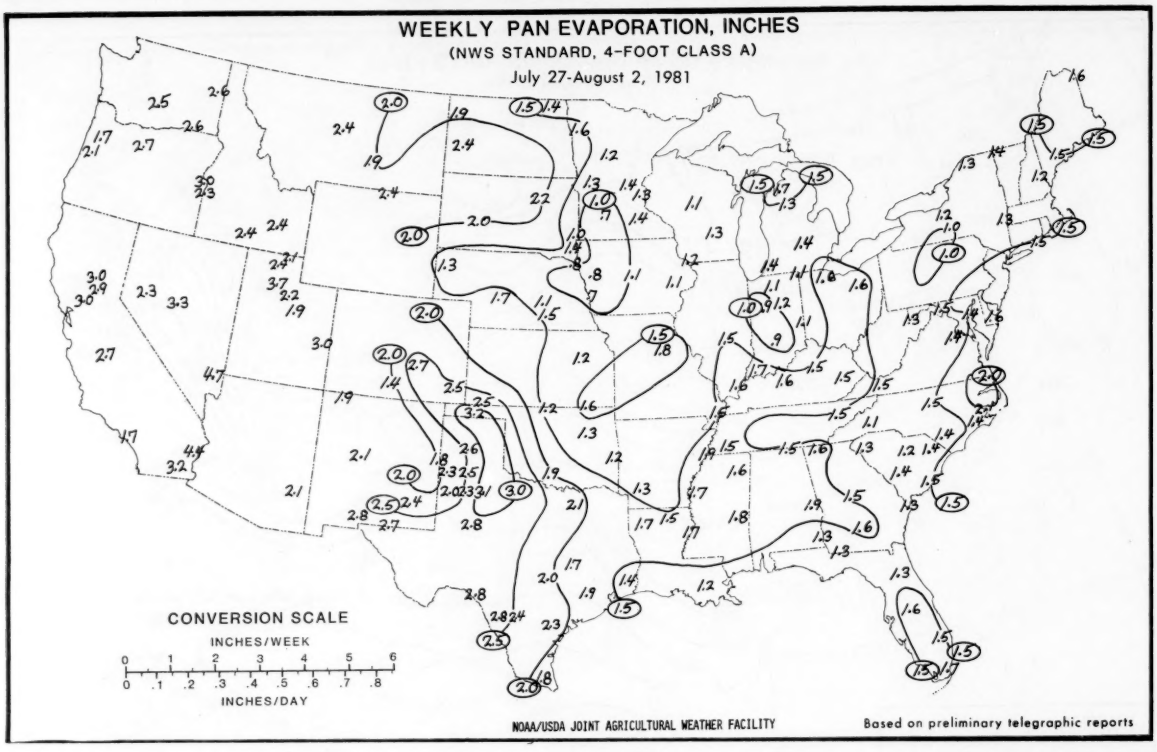
For example a day with temperature extremes of 82° and 60° would have contributed 21 GDU. A day with a high temperature of 90° and a low of 48°, will be considered as one with temperatures of 86° and 50° for purposes of calculation. That day would have had 18 GDU.

Reproduced from "Corn Production Handbook," C-560, Oct 1976, Kansas State Univ., Manhattan, KS

GDU's Required to Reach:

	Silking	Maturity
Early Season Variety	1390	2610
Full Season Variety	1560	2830




WEEKLY PAN EVAPORATION, INCHES
(NWS STANDARD, 4-FOOT CLASS A)
July 27-August 2, 1981
CONVERSION SCALE
INCHES/WEEK
0 1 2 3 4 5 6
0 .1 .2 .3 .4 .5 .6 .7 .8
INCHES/DAY
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary telegraphic reports

Pan Evaporation: Guide to Estimating Corn Water Requirements

Don Haddock, Chief of NOAA Section
NOAA/USDA Joint Agricultural Weather Facility

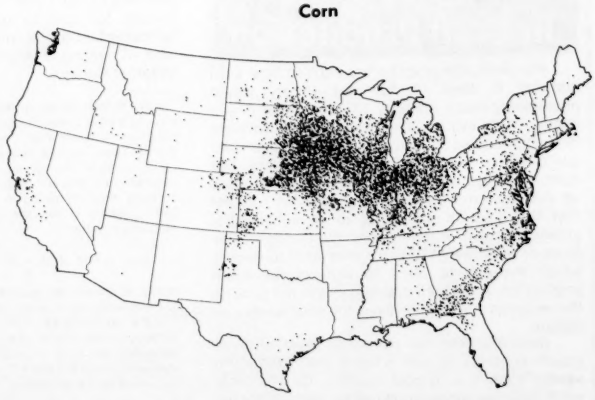
Estimates of water requirements are necessary to calculate how much irrigation water is needed or to assess current crop status. Crop water needs can be estimated from pan evaporation data by using a crop/pan coefficient. This type of information is presented for corn in the accompanying graphs.

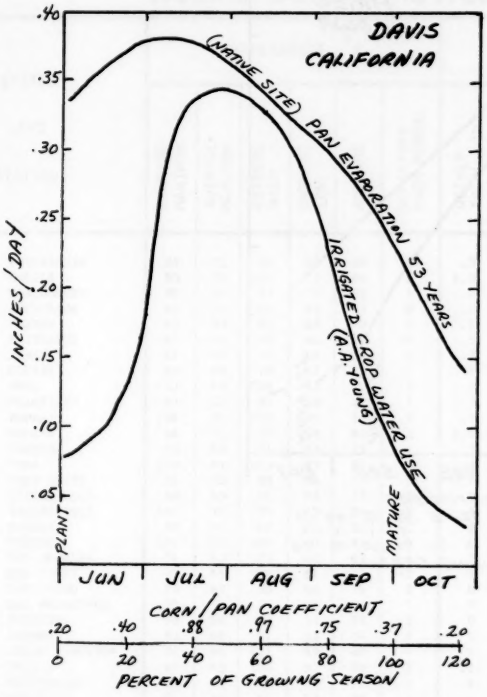
Corn is one of the leading crops produced in the United States. Most corn is grown in the Corn Belt, as depicted by the acreage dot map.

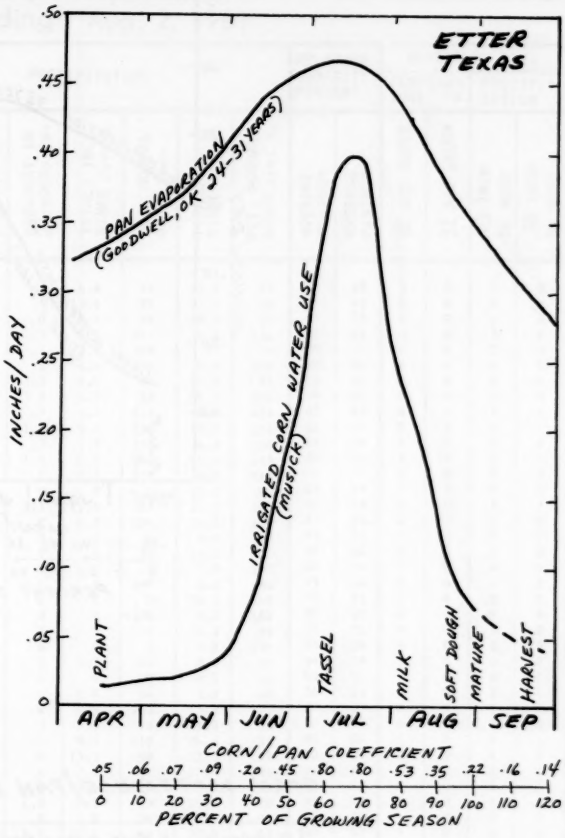
Corn uses little water during the germination and seedling stages, but the moisture need increases greatly during the rapid growth period, and reaches a peak during the reproductive stage (tassel and blister). As the crop matures, water needs decrease.

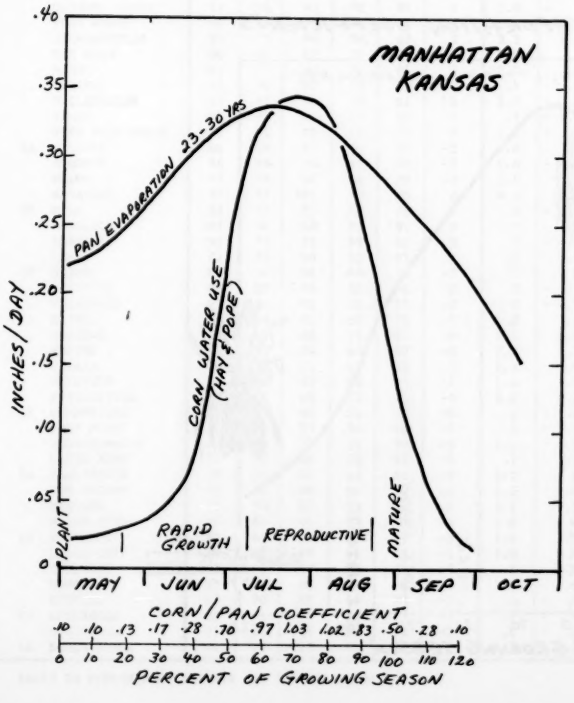
Corn may use more water at reproduction time than the evaporation from a pan, depending upon how much water is available from irrigation, rainfall, or stored soil moisture. If adequate water is not available during the critical reproductive stage, then yield could be low even though water was plentiful during other developmental stages.

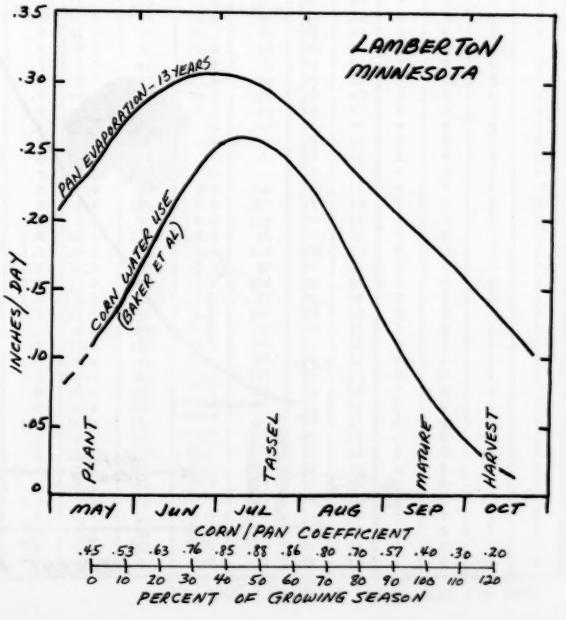
The growing season, as used in this article, extends from the time corn is planted until it is physiologically mature (black layer formation on tip of kernel).

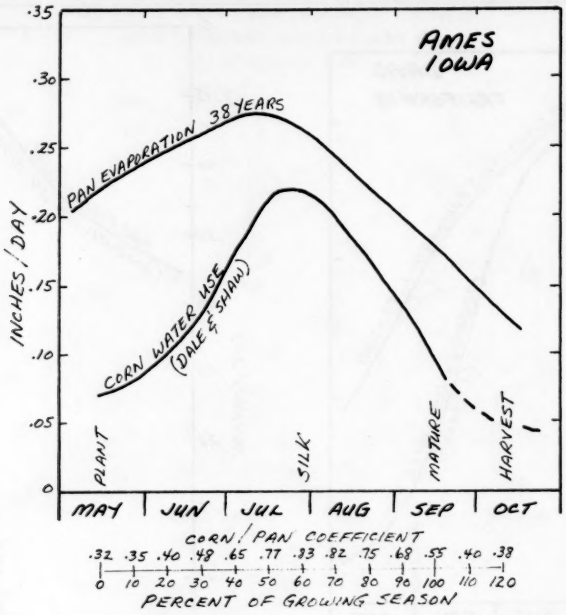


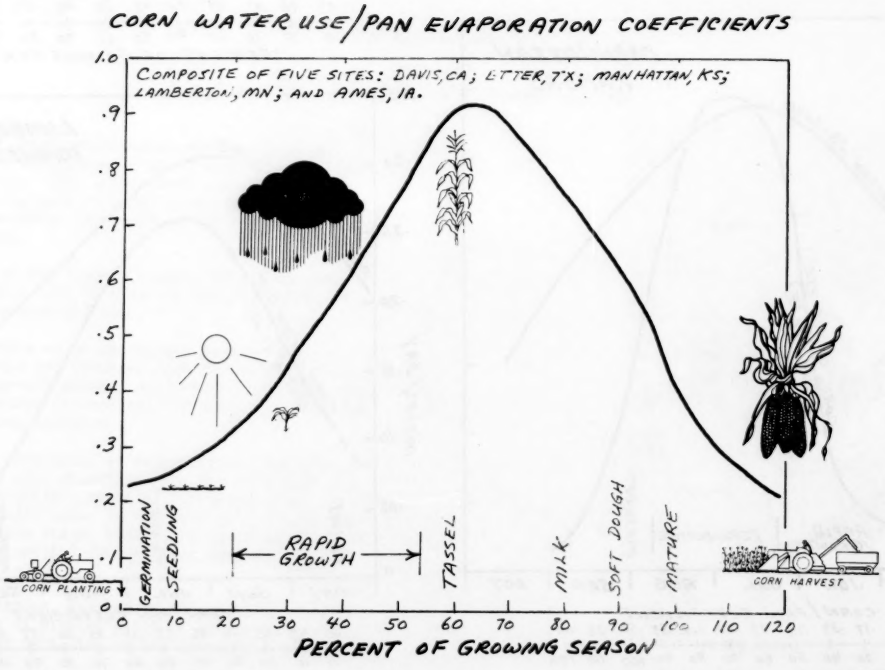

DAVIS
CALIFORNIA
(NATIVE SITE) PAN EVAPORATION 53 YEARS
IRRIGATED CROP WATER USE
(A.A. YOUNG)
INCHES/DAY
.40
.35
.30
.25
.20
.15
.10
.05
PLANT
MATURE
JUN
JUL
AUG
SEP
OCT
CORN/PAN COEFFICIENT
.20 .40 .88 .97 .75 .37 .20
0 20 40 60 80 100 120
PERCENT OF GROWING SEASON


ETTER
TEXAS
PAN EVAPORATION
(GOODWELL, OK 74-31 YEARS)
IRRIGATED CORN WATER USE
(MUSICK)
INCHES/DAY
.50
.45
.40
.35
.30
.25
.20
.15
.10
.05
PLANT
TASSEL
MILK
SOFT DOUGH
MATURE
HARVEST
APR
MAY
JUN
JUL
AUG
SEP
CORN/PAN COEFFICIENT
.05 .06 .07 .09 .20 .45 .80 .80 .53 .35 .22 .16 .14
0 10 20 30 40 50 60 70 80 90 100 110 120
PERCENT OF GROWING SEASON


MANHATTAN
KANSAS
PAN EVAPORATION 23-30 YRS
CORN WATER USE
(HAY & POPE)
INCHES/DAY
.40
.35
.30
.25
.20
.15
.10
.05
PLANT
RAPID GROWTH
REPRODUCTIVE
MATURE
MAY
JUN
JUL
AUG
SEP
OCT
CORN/PAN COEFFICIENT
.10 .10 .13 .17 .28 .70 .97 1.03 1.02 .83 .50 .28 .10
0 10 20 30 40 50 60 70 80 90 100 110 120
PERCENT OF GROWING SEASON


LAMBERTON
MINNESOTA
PAN EVAPORATION - 13 YEARS
CORN WATER USE
(BAKER ET AL)
INCHES/DAY
.35
.30
.25
.20
.15
.10
.05
PLANT
TASSEL
MATURE
HARVEST
MAY
JUN
JUL
AUG
SEP
OCT
CORN/PAN COEFFICIENT
.45 .53 .63 .76 .85 .88 .86 .80 .70 .57 .40 .30 .20
0 10 20 30 40 50 60 70 80 90 100 110 120
PERCENT OF GROWING SEASON


AMES
IOWA
PAN EVAPORATION 38 YEARS
CORN WATER USE
(DALE & SHAW)
INCHES / DAY
.35
.30
.25
.20
.15
.10
.05
0
PLANT
SILK
MATURE
HARVEST
MAY
JUN
JUL
AUG
SEP
OCT
CORN / PAN COEFFICIENT
.32 .35 .40 .48 .65 .77 .83 .82 .75 .68 .55 .40 .38
0 10 20 30 40 50 60 70 80 90 100 110 120
PERCENT OF GROWING SEASON


CORN WATER USE/PAN EVAPORATION COEFFICIENTS
COMPOSITE OF FIVE SITES: DAVIS, CA; ETTER, TX; MANHATTAN, KS; LAMBERTON, MN; AND AMES, IA.
1.0
.9
.8
.7
.6
.5
.4
.3
.2
.1
0
GERMINATION
SEEDLING
RAPID GROWTH
TASSEL
MILK
SOFT DOUGH
MATURE
CORN PLANTING
CORN HARVEST
0 10 20 30 40 50 60 70 80 90 100 110 120
PERCENT OF GROWING SEASON

Weather Data for the Week Ending Aug. 2, 1981

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE June 1	PCT. NORMAL SINCE June 1	TOTAL, IN., SINCE Jan. 1	PCT. NORMAL SINCE Jan. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	89	71	96	68	80	0	.3	- .8	.3	6.4	67	24.8	73	88	52	3	0	1	0
MOBILE	93	74	101	73	84	2	1.9	0	.6	13.4	85	39.9	94	86	49	7	0	6	1
MONTGOMERY	90	74	99	73	82	1	.2	- .8	.2	7.1	74	30.0	95	89	55	5	0	1	0
AK ANCHORAGE	62	52	69	46	57	0	.8	.3	.2	5.5	167	8.6	134	86	62	0	0	5	0
BARROW	47	33	63	28	40	1	.1	- .1	.1	2.2	169	--	--	100	76	0	4	2	0
FAIRBANKS	63	48	72	44	56	-4	.5	0	.2	4.4	126	5.9	100	98	62	0	0	6	0
JUNEAU	64	49	71	44	57	1	.3	- .9	.2	5.6	71	22.0	87	90	65	0	0	2	0
KODIAK	60	49	70	41	55	-1	T	- .8	T	4.2	53	40.8	136	94	68	0	0	2	0
NOME	53	46	55	38	50	-2	1.5	.8	.7	4.1	114	9.5	128	83	67	0	0	3	1
AZ FLAGSTAFF	81	53	83	50	67	1	1.3	.6	1.1	5.1	150	13.9	131	82	37	0	0	4	1
PHOENIX	104	85	108	79	94	3	.5	.3	.3	1.2	133	4.3	130	58	25	7	0	2	0
TUCSON	94	71	98	69	83	-3	2.0	1.5	1.1	6.4	246	11.4	219	86	32	7	0	4	2
WINSLOW	93	66	96	63	79	1	T	- .3	T	2.5	156	4.6	112	--	--	6	0	0	0
YUMA	109	81	111	79	95	0	0	- .1	0	0	0	1.1	65	48	21	7	0	0	0
AR FORT SMITH	85	70	92	64	78	-5	5.7	5.0	3.1	11.6	157	27.5	102	96	68	3	0	5	2
LITTLE ROCK	88	69	94	63	79	-3	T	- .6	T	8.2	124	30.8	100	87	55	4	0	1	0
CA BAKERSFIELD	101	70	106	65	86	2	0	0	0	0	0	4.4	110	51	15	7	0	0	0
EUREKA	59	51	60	50	55	-2	T	0	T	.6	75	19.0	81	96	84	0	0	0	0
FRESNO	101	65	104	60	83	3	0	0	0	0	0	7.5	107	64	16	7	0	0	0
LOS ANGELES	74	63	75	62	69	-1	0	0	0	T	+100	6.6	84	79	58	0	0	0	0
RED BLUFF	97	65	100	61	81	-2	0	0	0	T	0	16.3	119	70	21	7	0	0	0
SAN DIEGO	79	69	80	66	74	3	0	0	0	T	+100	8.5	142	80	60	0	0	0	0
SAN FRANCISCO	70	53	76	50	61	-1	T	0	T	T	0	12.2	99	87	52	0	0	0	0
STOCKTON	93	56	97	53	75	-2	0	0	0	0	0	9.2	102	84	26	6	0	0	0
CO DENVER	91	62	97	53	76	2	T	- .3	T	1.7	45	9.5	90	64	19	5	0	1	0
GRAND JUNCTION	96	64	101	59	80	1	T	- .2	T	.6	55	4.5	110	49	16	7	0	0	0
PUEBLO	95	63	100	57	79	2	.1	- .4	.1	1.6	44	3.9	48	74	24	6	0	2	0
CT BRIDGEPORT	82	62	85	55	72	-2	.4	- .5	.4	6.5	103	17.5	79	87	37	0	0	1	0
HARTFORD	84	56	88	53	70	-3	.4	- .4	.3	5.6	78	18.5	75	90	37	0	0	2	0
DC WASHINGTON	86	69	90	61	77	-2	.7	- .3	.7	9.3	118	19.9	88	92	50	1	0	1	1
FL APALACHICOLA	86	76	92	74	81	-1	.9	- .9	.4	13.5	98	22.3	69	95	70	2	0	4	0
DAYTONA BEACH	91	74	93	72	82	1	1.0	- .5	.6	7.1	51	17.9	65	92	59	7	0	3	1
FORT MYERS	91	77	95	73	84	1	1.6	- .2	.6	20.6	113	27.5	89	98	62	6	0	5	1
JACKSONVILLE	93	73	96	70	83	2	3.5	1.8	1.8	8.3	59	21.2	70	98	57	6	0	4	3
KEY WEST	90	81	92	75	86	1	1.0	.1	.9	3.0	34	7.4	39	92	69	4	0	3	1
MIAMI	91	77	93	72	84	1	2.2	.8	1.8	10.3	62	22.0	68	90	57	7	0	6	1
ORLANDO	95	74	97	73	85	3	.8	- .9	.7	16.4	103	25.1	82	95	47	7	0	2	1
TALLAHASSEE	89	73	95	72	81	-1	1.2	- .6	.7	12.3	76	34.0	88	98	61	3	0	4	1
TAMPA	91	74	93	73	83	1	.5	- 1.4	.2	11.3	73	20.5	70	98	60	5	0	4	0
WEST PALM BEACH	92	76	92	71	84	2	1.1	- .3	.7	8.5	56	21.8	69	89	60	7	0	3	1
GA ATLANTA	84	69	97	64	77	-2	.6	- .5	.3	5.7	63	23.1	72	92	63	3	0	4	0
AUGUSTA	88	69	99	67	79	-2	1.0	- .1	.7	9.7	107	25.9	92	98	59	3	0	5	1
MACON	87	70	98	66	79	-3	1.1	.2	.7	11.5	134	30.0	103	92	63	3	0	4	1
SAVANNAH	90	73	101	70	81	0	5.5	3.8	2.9	9.9	70	21.7	69	100	61	3	0	4	4
HI HILO	83	70	85	66	76	0	.8	- 1.7	.7	6.2	39	--	--	84	56	0	0	6	1
HONOLULU	87	74	88	73	81	0	T	- .1	T	.4	44	4.8	35	79	53	0	0	1	0
KAHULUI	90	73	92	69	82	3	0	- .1	0	T	0	--	--	69	46	4	0	0	0
LIHUE	87	75	89	73	81	2	.6	.2	.5	4.8	130	--	--	87	61	0	0	3	1
ID BOISE	91	54	96	49	73	-3	0	0	0	.9	75	8.9	116	51	14	6	0	0	0
LEWISTON	90	58	98	52	74	0	0	- .1	0	2.8	104	8.9	105	59	19	4	0	0	0
POCATELLO	91	51	95	42	71	-2	0	- .1	0	1.0	56	8.6	126	59	14	5	0	0	0
IL CAIRO	84	69	91	60	76	-5	1.8	1.1	1.8	10.5	135	29.0	96	--	--	1	0	1	1
CHICAGO	78	56	88	51	67	-6	2.7	2.0	1.3	10.4	130	25.4	126	94	50	0	0	3	2
MOLINE	77	58	84	49	67	-8	2.0	1.1	1.4	10.0	108	19.3	85	93	62	0	0	3	1
PEORIA	78	59	85	54	69	-7	2.7	1.9	1.8	14.0	179	29.1	130	94	66	0	0	3	2
ROCKFORD	76	57	85	48	66	-7	1.4	.5	1.1	8.1	90	18.5	83	94	58	0	0	3	1
SPRINGFIELD	81	61	85	57	71	-5	8.8	8.1	4.4	21.1	254	36.6	166	95	63	0	0	3	2
IN EVANSVILLE	84	62	92	55	73	-5	.6	- .1	.6	6.8	91	27.3	100	88	55	1	0	2	1
FORT WAYNE	78	59	83	54	68	-5	.5	- .3	.4	10.8	133	25.0	109	81	48	0	0	2	0
INDIANAPOLIS	81	60	85	55	70	-5	1.9	1.2	1.9	7.4	91	27.1	108	90	55	0	0	2	1
SOUTH BEND	77	57	84	55	67	-6	.7	- .1	.5	11.0	145	26.7	121	96	57	0	0	2	0
IA BURLINGTON	76	60	84	52	68	-8	1.2	.4	.8	16.8	198	29.2	136	94	68	0	0	3	1
DES MOINES	77	62	88	54	70	-6	1.3	.6	.9	11.4	134	17.8	89	91	65	0	0	3	2
DUBUQUE	73	58	82	52	66	-6	2.2	1.3	1.6	10.0	101	19.9	81	96	61	0	0	2	2
SIOUX CITY	76	64	86	57	70	-6	1.0	.4	.6	8.0	100	13.0	76	87	68	0	0	3	1
KS CONCORDIA	83	64	93	59	73	-6	1.5	.9	.8	13.6	162	24.0	134	98	66	3	0	3	1
DODGE CITY	89	69	98	66	79	-1	1.8	1.2	1.1	7.5	114	16.2	118	89	52	4	0	3	1
GOODLAND	88	62	97	60	75	-2	.1	- .4	.1	2.3	40	19.0	165	92	44	5	0	2	0
TOPEKA	82	66	90	59	74	-5	3.0	2.1	2.3	17.7	172	27.8	127	89	68	1	0	3	2
WICHITA	87	70	95	64	79	-3	.4	- .4	.2	5.8	64	15.3	79	87	57	2	0	2	0
KY LEXINGTON	82	64	90	56	73	-3	.9	- .1	.6	7.5	80	24.2	82	95	59	1	0	2	1
LOUISVILLE	85	65	94	59	75	-2	.6	- .2	.5	7.3	90	21.4	75	92	54	2	0	2	1
LA BATON ROUGE	94	74	97	71	84	2	.2	- 1.2	.1	9.0	84	26.9	78	96	52	6	0	2	0

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

+100 = NORMAL & ACTUAL NEAR THE SAME

Weather Data for the Week Ending Aug. 2, 1981

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE June 1	PCT. NORMAL SINCE June 1	TOTAL, IN., SINCE Jan. 1	PCT. NORMAL SINCE Jan. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
LAKE CHARLES	91	75	93	74	83	0	1.6	.3	.6	22.2	187	36.4	108	97	64	6	0	4	2
NEW ORLEANS	95	75	96	73	85	3	1.3	- .2	.8	10.8	91	30.5	86	100	58	7	0	3	1
SHREVEPORT	92	73	93	71	82	-2	.9	.3	.5	9.2	144	29.6	104	98	59	7	0	3	0
ME CARIBOU	79	53	89	43	66	1	.9	- .1	.7	7.0	91	20.1	102	81	35	0	0	3	1
PORTLAND	78	56	88	51	67	-1	1.7	1.1	.8	10.0	169	25.2	108	93	47	0	0	3	2
MD BALTIMORE	85	64	89	56	75	-2	1.2	.2	1.2	10.0	125	20.3	85	86	45	0	0	1	1
MA BOSTON	82	63	88	58	72	-1	.6	- .1	.5	5.2	85	17.6	73	81	42	0	0	2	0
CHATHAM	78	62	82	61	70	--	.5	--	.3	8.2	--	24.2	--	89	67	0	0	2	0
MI ALPENA	78	50	88	42	64	-2	.2	- .4	.2	3.5	61	11.5	72	97	47	0	0	1	0
DETROIT	79	56	84	51	67	-5	1.1	.4	1.1	7.6	113	18.1	93	86	43	0	0	1	1
FLINT	77	57	83	52	67	-3	1.1	.4	1.1	7.0	106	17.8	99	90	46	0	0	3	1
GRAND RAPIDS	78	56	85	52	67	-5	1.0	.4	1.0	8.1	117	26.2	135	93	52	0	0	2	1
HOUGHTON LAKE	74	52	84	43	63	-4	.3	- .3	.3	6.0	90	15.7	94	91	54	0	0	1	0
LANSING	77	56	85	50	67	-4	.6	0	.6	5.0	78	17.9	96	97	48	0	0	2	1
MARQUETTE	78	54	85	43	66	1	.3	- .5	.3	7.4	91	19.5	97	93	49	0	0	1	0
MUSKEGON	75	55	83	48	65	-6	.6	0	.6	5.7	116	16.8	94	93	50	0	0	2	1
SAULT STE. MARIE	73	50	80	44	62	-3	.5	0	.4	6.8	111	15.6	93	95	52	0	0	3	0
MN DULUTH	74	56	80	42	65	-2	.1	- .8	T	9.1	108	17.5	96	95	63	0	0	3	0
INT'L FALLS	79	53	85	44	66	0	.4	- .4	.3	6.0	75	11.7	77	94	49	0	0	2	0
MINNEAPOLIS	76	60	83	50	68	-5	.6	- .2	.4	9.0	114	16.4	99	92	59	0	0	4	0
ROCHESTER	75	58	82	49	67	-5	.9	.1	.6	14.6	168	22.6	130	93	65	0	0	4	1
SAINT CLOUD	77	56	85	44	67	-5	.3	- .5	.3	8.9	110	16.4	96	89	58	0	0	1	0
MS JACKSON	95	71	96	64	83	1	T	- .9	T	10.2	126	28.6	89	89	42	7	0	0	0
MERIDIAN	95	71	97	66	83	1	.7	- .4	.7	5.9	63	28.7	86	91	44	7	0	1	1
MO COLUMBIA	82	63	87	57	72	-6	.8	.1	.8	20.2	235	36.7	156	93	65	0	0	1	1
KANSAS CITY	85	66	99	60	75	-3	4.3	3.4	2.6	16.6	164	30.2	131	99	72	1	0	3	3
SAINT LOUIS	82	64	89	59	73	-6	2.8	2.1	2.4	16.7	196	32.7	142	94	55	0	0	3	1
SPRINGFIELD	82	66	91	60	74	-5	2.1	1.5	1.0	12.8	151	27.0	108	94	71	2	0	4	2
MT BILLINGS	89	57	94	51	73	0	.1	0	T	3.3	97	13.2	140	68	26	4	0	3	0
GLASGOW	87	55	94	51	71	-1	.1	- .2	.1	3.7	86	6.5	86	80	23	2	0	3	0
GREAT FALLS	86	51	91	45	68	-2	.1	- .2	T	2.4	53	10.9	103	67	21	1	0	3	0
HAVRE	84	52	92	46	68	-3	.1	- .2	.1	3.0	75	6.5	80	79	23	1	0	1	0
HELENA	85	51	90	45	68	-1	.2	.1	.2	2.8	82	11.1	150	73	22	1	0	1	0
KALISPELL	79	43	85	37	61	-4	.2	0	.2	4.4	122	13.7	132	89	35	0	0	1	0
MILES CITY	90	59	98	56	75	-1	.6	.4	.5	3.5	71	7.0	72	78	26	4	0	2	1
MISSOULA	84	47	88	43	66	-2	.1	- .1	T	3.9	122	11.0	128	77	26	0	0	2	0
NE GRAND ISLAND	78	63	88	56	70	-7	1.7	1.1	1.5	5.5	71	14.6	90	100	73	0	0	2	1
LINCOLN	79	65	91	59	72	-6	2.6	1.9	2.4	6.6	78	13.7	78	97	73	1	0	4	1
NORFOLK	78	62	87	55	70	-6	.9	.4	.5	8.1	99	13.6	82	96	65	0	0	3	1
NORTH PLATTE	82	62	92	55	72	-3	1.0	.5	.7	8.1	117	19.0	137	98	62	1	0	4	2
OMAHA	78	63	89	55	70	-5	3.3	2.5	2.5	9.0	101	16.0	84	95	74	0	0	3	2
VALENTINE	79	60	95	51	69	-6	.6	.1	.4	6.6	105	10.7	85	90	56	1	0	4	0
NV ELY	91	46	94	42	68	0	0	- .1	0	.4	27	5.9	116	36	10	6	0	0	0
LAS VEGAS	106	76	109	72	91	1	0	- .1	0	T	0	2.2	92	17	6	7	0	0	0
RENO	91	42	96	37	67	-3	T	0	T	T	0	2.5	53	56	8	5	0	0	0
WINNEMUCCA	94	47	100	43	71	-1	0	0	0	T	0	4.1	77	34	6	7	0	0	0
NH CONCORD	79	54	87	49	66	-4	1.5	.8	.7	8.5	125	23.9	117	96	44	0	0	3	1
NJ ATLANTIC CITY	90	58	93	53	74	-1	.2	- .9	.2	6.2	77	21.3	80	88	34	3	0	1	0
TRENTON	83	64	87	58	74	-2	.1	- 1.0	.1	8.0	98	21.0	87	96	50	0	0	2	0
NM ALBUQUERQUE	93	64	97	63	79	0	.1	- .3	T	1.4	70	3.8	88	75	27	6	0	3	0
ROSWELL	90	67	95	62	78	-1	1.1	.6	.9	11.0	333	15.9	265	93	43	4	0	4	1
NY ALBANY	81	56	87	52	68	-4	.2	- .5	.2	6.3	100	16.6	86	93	41	0	0	1	0
BINGHAMTON	76	56	82	52	66	-3	.3	- .6	.3	5.4	72	16.1	73	88	46	0	0	1	0
BUFFALO	78	60	84	56	69	-1	1.2	.5	1.0	8.6	162	20.5	105	89	52	0	0	2	1
NEW YORK	84	67	88	63	76	-1	1.5	.5	1.2	8.2	114	21.5	89	85	39	0	0	2	1
ROCHESTER	78	58	84	53	68	-3	1.1	.4	.8	7.4	132	17.2	94	95	50	0	0	2	1
SYRACUSE	81	57	87	55	69	-3	.6	- .2	.6	4.6	72	14.3	68	91	45	0	0	1	1
NC ASHEVILLE	79	64	91	61	72	-2	.7	- .5	.3	6.7	74	24.8	89	99	66	2	0	5	0
CHARLOTTE	82	68	94	62	75	-4	2.9	1.9	1.4	9.6	109	21.6	80	92	60	2	0	4	3
GREENSBORO	85	64	92	59	74	-3	2.3	1.3	1.6	11.9	140	22.6	91	87	48	2	0	3	2
HATTERAS	85	74	90	71	80	2	2.0	.6	1.1	13.2	118	26.3	87	91	65	1	0	3	2
RALEIGH	90	69	97	65	79	1	.4	- .8	.4	6.2	68	17.9	70	89	47	2	0	1	0
WILMINGTON	87	72	96	67	79	-2	3.2	1.3	1.8	7.9	54	21.5	67	92	61	3	0	3	2
ND BISMARCK	84	58	94	48	71	-1	.9	.4	.7	6.1	102	8.3	73	92	45	1	0	3	1
FARGO	81	59	91	48	70	-2	.8	.1	.6	5.9	87	11.2	87	90	45	1	0	4	1
WILLISTON	90	58	95	53	74	3	.3	- .1	.2	6.2	113	8.5	86	82	31	4	0	3	0
OH AKRON-CANTON	79	58	83	51	68	-4	.8	0	.7	9.9	132	29.6	129	83	49	0	0	2	1
CINCINNATI	83	63	87	55	73	-3	.6	- .2	.4	7.2	88	23.8	92	92	55	0	0	2	0
CLEVELAND	78	57	83	50	68	-4	1.4	.6	1.4	10.1	142	22.1	98	82	48	0	0	1	1
COLUMBUS	78	58	83	49	68	-5	.7	- .1	.6	10.0	116	28.5	115	86	59	0	0	2	1
DAYTON	83	59	87	50	71	-4	.5	- .2	.5	11.3	149	26.1	113	91	57	0	0	1	1
TOLEDO	78	55	84	49	67	-5	1.0	.3	.8	12.4	177	22.4	114	90	51	0	0	2	1
YOUNGSTOWN	77	56	81	49	67	-4	.8	0	.7	6.6	86	22.3	94	83	49	0	0	2	1
OK OKLAHOMA CITY	88	72	98	68	80	-3	5.8	5.3	5.6	13.8	197	23.6	116	96	55	4	0	6	1

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

Weather Data for the Week Ending Aug. 2, 1981

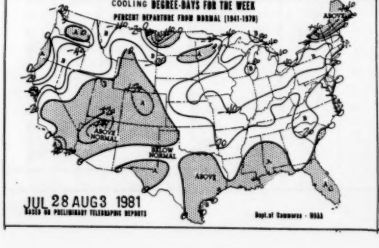
STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION								RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE June 1	PCT. NORMAL SINCE June 1	TOTAL, IN., SINCE Jan. 1	PCT. NORMAL SINCE Jan. 1		AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
TULSA	89	72	97	70	81	-2	5.3	4.6	3.8	9.6	114	22.3	94		93	60	4	0	4	2
OR ASTORIA	67	56	70	52	61	0	T	.2	T	6.8	194	34.1	97		84	63	0	0	0	0
BURNS	85	44	89	39	65	-4	0	.1	0	.7	50	7.1	104		--	--	0	0	0	0
MEDFORD	93	54	104	48	73	1	0	.1	0	.9	69	6.3	57		76	20	6	0	0	0
PENDLETON	86	57	97	48	72	-2	T	0	T	2.4	200	9.0	120		60	20	2	0	0	0
PORTLAND	78	58	95	54	68	0	0	.1	0	3.5	167	15.4	77		89	48	1	0	0	0
SALEM	81	49	98	45	65	-2	0	.1	0	3.6	180	16.7	75		95	41	1	0	0	0
PA ALLENTOWN	81	57	84	54	69	-5	.1	.9	T	8.5	104	22.8	92		97	46	0	0	2	0
ERIE	79	60	84	53	69	0	1.1	.3	1.1	7.9	113	23.8	111		82	47	0	0	1	1
HARRISBURG	84	60	87	55	72	-4	.1	.7	.1	9.3	135	21.3	97		94	46	0	0	2	0
PHILADELPHIA	85	64	87	58	74	-3	.1	.8	.1	8.9	111	21.2	90		89	43	0	0	1	0
PITTSBURGH	81	60	87	53	71	-1	1.1	.2	1.1	12.1	161	25.7	111		95	54	0	0	1	1
SCRANTON	79	56	84	53	68	-4	.2	.7	.2	7.8	99	23.7	112		84	48	0	0	1	0
RI PROVIDENCE	88	60	94	57	74	2	.5	.2	.3	6.0	105	18.2	77		92	35	5	0	3	0
SC CHARLESTON	89	74	98	71	82	1	2.4	.7	1.3	20.2	136	31.8	98		95	66	3	0	6	1
COLUMBIA	85	70	97	66	77	-4	3.6	2.3	2.7	12.2	124	24.6	86		97	65	3	0	3	1
GREENVILLE	82	67	94	61	74	-5	1.4	.5	.9	6.9	82	19.4	66		92	60	3	0	5	1
SD ABERDEEN	85	60	96	44	73	0	.1	.5	.1	6.2	93	10.4	79		89	44	4	0	1	0
HURON	83	64	92	54	73	-2	3.3	2.9	2.9	6.9	113	9.8	74		93	57	3	0	3	1
RAPID CITY	82	58	91	53	70	-4	.1	.3	.1	6.4	105	9.9	75		94	49	1	0	2	0
SIOUX FALLS	77	65	88	57	71	-3	.3	.3	.2	8.1	105	11.5	70		80	62	0	0	4	0
TN CHATTANOOGA	88	68	95	63	78	-1	T	1.0	T	7.8	77	26.3	81		87	51	3	0	3	0
KNOXVILLE	87	72	95	69	79	1	.6	.3	.3	8.1	94	23.5	79		84	54	2	0	3	0
MEMPHIS	88	71	96	66	80	-2	T	.8	T	4.5	63	25.2	79		86	49	4	0	1	0
NASHVILLE	85	68	92	63	76	-4	.4	.4	.3	11.6	155	28.3	95		88	55	2	0	2	0
TX ABILENE	97	77	101	75	87	2	T	.5	T	4.4	81	13.9	94		73	28	7	0	1	0
AMARILLO	91	69	95	64	80	1	2.1	1.5	1.3	4.0	62	9.3	78		81	41	5	0	5	2
AUSTIN	97	77	98	76	87	2	.1	.3	.1	18.4	354	34.3	173		87	41	7	0	1	0
BEAUMONT	89	75	93	75	82	-1	2.1	.7	1.4	19.9	178	34.6	108		97	69	4	0	3	2
BROWNSVILLE	97	77	98	75	87	2	T	.2	T	4.8	117	17.2	151		91	42	7	0	2	0
CORPUS CHRISTI	93	77	95	75	85	-1	.1	.4	.1	9.2	192	25.6	172		95	52	6	0	1	0
DEL RIO	96	74	101	72	85	-2	.4	.3	.4	6.2	207	18.1	191		87	46	6	0	2	0
EL PASO	94	72	99	71	83	1	1.3	1.0	.5	2.7	117	6.0	146		85	36	6	0	4	1
FORT WORTH	98	77	100	73	87	1	T	.4	T	9.7	190	24.1	117		85	39	7	0	1	0
GALVESTON	90	79	92	77	84	0	.5	.5	.4	15.6	177	24.0	104		86	65	5	0	2	0
HOUSTON	95	76	96	75	85	1	.1	.9	.1	14.2	156	32.1	116		94	50	7	0	2	0
LUBBOCK	88	71	93	67	79	-1	2.4	1.9	2.0	4.3	83	9.7	87		83	48	3	0	4	1
MIDLAND	97	71	102	68	84	1	.1	.3	.1	.8	24	6.9	90		75	31	7	0	2	0
SAN ANGELO	95	73	98	71	84	-2	T	.2	T	4.7	147	17.4	174		83	34	6	0	1	0
SAN ANTONIO	96	76	98	75	86	1	T	.3	T	8.9	185	23.5	148		91	42	7	0	2	0
VICTORIA	94	76	95	75	85	0	.3	.3	.2	13.7	217	28.1	149		97	51	7	0	2	0
WACO	97	76	98	74	87	0	T	.3	T	7.4	168	18.1	92		88	41	7	0	0	0
WICHITA FALLS	97	74	103	69	85	-2	.2	.1	.2	5.9	107	18.8	107		80	35	6	0	2	0
UT BLANDING	90	61	93	58	75	2	.1	.2	.1	3.2	213	7.8	137		60	28	3	0	2	0
SALT LAKE CITY	95	64	100	55	80	1	0	.2	0	1.3	62	9.1	92		48	13	6	0	0	0
VT BURLINGTON	77	55	85	52	66	-4	.8	.1	.6	6.3	86	20.5	115		82	38	0	0	2	1
VA LYNCHBURG	86	63	92	58	75	-1	T	1.0	T	10.3	130	20.5	90		91	46	2	0	1	0
NORFOLK	87	69	94	63	78	0	T	1.4	T	10.1	104	20.2	78		88	49	3	0	0	0
RICHMOND	89	65	96	58	77	-1	.2	1.1	.1	7.7	81	22.5	90		91	46	3	0	3	0
ROANOKE	87	60	95	54	74	-2	.7	.3	.6	5.5	75	17.3	75		89	40	2	0	2	1
WA COLVILLE	79	53	90	49	66	-3	.5	.3	.3	7.0	292	16.0	167		90	49	1	0	3	0
OMAK	90	59	99	48	75	--	0	--	0	1.3	--	6.4	--		65	36	4	0	0	0
QUILLAYUTE	67	52	73	48	59	0	.1	.4	T	9.9	165	54.7	97		96	64	0	0	2	0
SEATTLE-TACOMA	74	56	87	52	65	0	T	.1	T	3.8	173	16.0	81		84	44	0	0	1	0
SPOKANE	84	53	93	44	68	-3	T	0	T	2.5	125	9.5	89		78	23	1	0	1	0
WALLA-WALLA	90	64	101	56	77	1	T	0	T	3.4	200	14.0	139		54	19	5	0	1	0
YAKIMA	89	54	98	46	71	0	0	0	0	.7	70	3.2	74		74	23	4	0	0	0
WV BECKLEY	75	60	83	50	68	-2	.9	0	.6	8.9	98	22.0	80		90	60	0	0	3	1
CHARLESTON	85	61	91	55	73	-2	1.2	.1	1.1	9.6	109	25.0	94		91	47	2	0	3	1
HUNTINGTON	84	63	89	57	74	-1	.6	.3	.3	9.6	120	28.7	114		95	52	0	0	3	0
PARKERSBURG	79	61	85	52	70	-4	1.5	.6	1.1	9.8	113	22.5	89		94	54	0	0	2	1
WI GREEN BAY	78	55	87	46	66	-4	.4	.2	.4	3.5	51	11.5	70		92	47	0	0	2	0
LA CROSSE	78	62	86	53	70	-3	2.1	1.4	1.5	12.3	150	21.4	116		96	63	0	0	4	2
MADISON	77	56	85	47	66	-5	1.2	.5	.6	10.4	124	17.3	92		89	51	0	0	3	2
MILWAUKEE	71	54	81	49	63	-8	.9	.2	.4	6.8	94	18.3	103		98	56	0	0	3	0
WY CASPER	90	53	97	46	72	-1	T	.1	T	1.7	74	8.4	111		73	15	5	0	0	0
CHEYENNE	83	56	90	49	69	-1	.2	.2	.2	4.6	102	12.0	113		79	26	1	0	3	0
LANDER	88	55	97	45	72	0	0	.1	0	.9	36	8.1	84		60	18	4	0	0	0
SHERIDAN	87	54	96	51	71	-1	T	.1	T	5.0	125	11.0	97		76	28	2	0	1	0
PR SAN JUAN	91	79	92	76	85	4	.5	1.1	.3	12.5	99	36.3	119		90	67	6	0	3	0

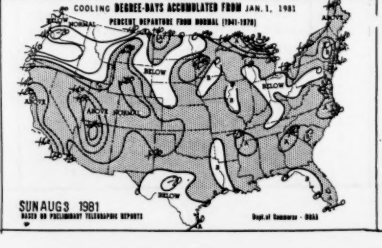
BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

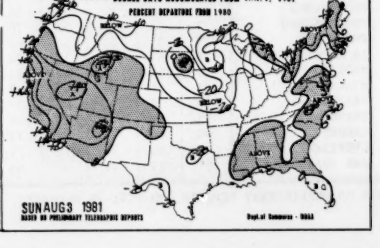
COOLING DEGREE DAYS (BASE 65°) FOR WEEK ENDING AUG. 2, 1981.

BASED ON 1941-70 NORMALS. + ACCUMULATION FROM JAN 1, 1981

STATES AND STATIONS	WEEKLY TOTAL	WEEKLY DEPARTURE*	SEASONAL ACCUMULATION + TOTAL	SEASONAL ACCUMULATION + DEPARTURE*	SEASONAL ACCUMULATION + DEPARTURE FROM 1980
ALA. BIRMINGHAM	106	1	1297	131	57
MOBILE	131	12	1601	59-	22
MONTGOMERY	122	10	1490	161	145
ARIZ. FLAGSTAFF	24	10	252	163	62
PHOENIX	207	23	2772	785	490
TUCSON	128	17	1759	146	43
WINSLOW	115	17	1059	342	362
YUMA	217	8	2774	457	447
ARK. FORT SMITH	93	33	1190	7-	106
LITTLE ROCK	100	19	1332	174-	119
CALIF. BAKERSFIELD	146	13	1644	410	503
EUREKA	0	0	3	3	1
FRESNO	127	17	1452	496	381
LOS ANGELES	28	6	520	283	284
RED BLUFF	110	12	1351	269	261
SAN DIEGO	65	2	751	46	21
SAN FRANCISCO	9	2	100	54	63
STOCKTON	70	14	1102	401	305
COLO. DENVER	82	19	580	204-	45
GRAND JUNCTION	104	7	895	187	133
PUEBLO	99	15	871	249	93
CONN. BRIDGEPORT	56	9	449	30-	55
HARTFORD	44	12	532	151	64
DEL. WILMINGTON	74	3	730	129	54
D.C. WASHINGTON	88	10	1086	229	10
FLA. APALACHICOLA	119	0	1500	20	147
DAYTONA BEACH	123	0	1687	75	43
FORT MYERS	137	11	2358	292	141
JACKSONVILLE	127	15	1650	169	32
KEY WEST	144	4	2574	221	196
LAKELAND	129	10	1699	176	200
MIAMI	133	7	2410	177	45
ORLANDO	140	21	1897	84	59
TALLAHASSEE	119	2	1439	73	3
TAMPA	130	15	1915	150	203
WEST PALM BEACH	129	10	2235	160	148
GA. ATLANTA	83	8	1301	356	86
AUGUSTA	96	16	1250	34	25
MACON	107	19	1463	25	45
SAVANNAH	115	0	1593	205	99
IDAHO. BOISE	52	22	277	146	88
LEWISTON	69	0	276	108	72
POCATELLO	44	12	225	54	66
ILL. CAIRO	73	39	1179	57-	114
CHICAGO	29	31	499	89-	16
MOLINE	27	43	517	56-	139
PEORIA	32	40	644	25-	45
ROCKFORD	26	43	485	30-	35
SPRINGFIELD	45	32	815	112-	56
IND. EVANSVILLE	60	31	911	42-	35
FORT WAYNE	26	30	445	28-	59
INDIANAPOLIS	41	29	647	25-	48
SOUTH BEND	22	34	377	54-	235
IOWA. BURLINGTON	31	46	570	60-	141
DES MOINES	41	36	691	102-	113
DUBUQUE	20	36	417	28-	170
SIOUX CITY	43	34	611	5-	110
KANS. CONCORDIA	59	39	826	49-	258
DODGE CITY	101	4	1121	271-	112
GOODLAND	69	15	592	25-	128
TOPEKA	65	33	919	77-	237
WICHITA	98	20	1134	125-	252
KY. LEXINGTON	60	18	702	43-	70
LOUISVILLE	74	10	926	150-	37
LA. BATON ROUGE	134	15	1657	112	35
LAKE CHARLES	139	0	1571	1-	14
NEW ORLEANS	137	18	1798	208-	33
SHREVEPORT	122	11	1399	79-	243
MAINE. CARIBOU	24	8	130	37-	8
PORTLAND	28	0	192	42-	39
MD. BALTIMORE	68	16	769	90	19
MASS. BOSTON	55	5	576	163	71
MICH. ALPENA	16	10	206	72	26
DETROIT	15	37	378	35-	5
FLINT	25	26	293	13	13
GRAND RAPIDS	23	26	370	5-	32
HOUGHTON LAKE	14	12	183	20	15
LANSING	21	28	373	30-	7
MARQUETTE	24	10	126	43-	21
MUSKEGON	16	26	249	33-	34
S. STE. MARIE	3	16	53	23	3
MINN. DULUTH	18	3	111	5-	90
INTERNATL FALLS	15	6	171	45-	99
MINNEAPOLIS	34	22	316	73-	245
ROCHESTER	28	14	276	42-	207
ST. CLOUD	42	0	437	153	115
MISS. JACKSON	128	9	1526	127	59
MERIDIAN	128	9	1529	172	165
MO. COLUMBIA	53	38	802	13-	340
KANSAS CITY	62	26	823	43-	258
ST. LOUIS	50	39	909	12-	226
SPRINGFIELD	68	30	936	110-	107
MONT. BILLINGS	57	1	395	92-	131
GLASGOW	44	5	272	3-	142
GREAT FALLS	28	11	117	80-	129
HAVRE	27	15	127	120-	161
HELENA	26	3	133	48-	10
KALISPELL	0	17	36	58-	18
MILES CITY	60	17	424	32-	204
MISSOULA	6	12	63	50-	36
NEBR. GRAND ISLAND	46	38	679	34-	182
LINCOLN	55	36	866	141-	97
NORFOLK	35	36	649	1-	138
NORTH PLATTE	53	17	465	45-	252
OMAHA	47	44	732	4-	87
VALENTINE	60	10	483	20-	194
NEV. ELY	27	3	220	100	82
LAS VEGAS	186	11	2145	425	433
RENO	15	20	277	69	4
WINNEMUCCA	40	6	352	88	14
N.H. CONCORD	18	18	311	82	29
N.J. ATLANTIC CITY	65	5	587	61	186
TRENTON	60	17	606	7-	100
N.MEX. ALBUQUERQUE	98	1	945	129-	52
ROSWELL	96	7	1139	157-	257
N.Y. ALBANY	27	22	307	74-	31
BINGHAMTON	20	15	272	32-	22
BUFFALO	32	10	332	57	8
NEW YORK	78	6	744	112	30
ROCHESTER	27	22	399	58-	2
SYRACUSE	31	18	458	111	88
N.C. ASHEVILLE	47	16	641	111-	60
CHARLOTTE	72	26	1006	41	60
GREENSBORO	67	19	934	93	168
HATTERAS	100	7	1012	174	91
RALEIGH	102	11	1066	212	49
WILMINGTON	101	11	1198	38	38
N.DAK. BISMARCK	45	4	251	58-	154
FARGO	46	3	266	37-	174
WILLISTON	62	20	387	122-	127
OHIO. AKRON-CANTON	32	17	427	28	52
CINCINNATI	60	17	665	2	12
CLEVELAND	27	22	362	64-	4
COLUMBUS	30	23	433	32-	80
DAYTON	47	23	580	4	26
TOLEDO	20	36	384	49-	57
YOUNGSTOWN	20	22	470	142	235
OKLA. OKLAHOMA CITY	107	17	1241	148-	206
TULSA	113	13	1402	262	270
OREG. ASTORIA	0	0	4	10-	9
BURNS	58	26	78	102-	10
MEDFORD	58	5	327	11	55
PENDLETON	49	14	217	179-	53
PORTLAND	29	1	140	27-	6
SALEM	17	8	74	61	1
PA. ALLENTOWN	35	28	577	83	56
ERIE	33	5	387	157	130
HARRISBURG	53	24	617	32	36
PHILADELPHIA	67	17	678	2-	69
PITTSBURGH	46	3	411	4-	82
SCRANTON	22	29	415	26-	25
R.I. PROVIDENCE	67	14	544	220	103
S.C. CHARLESTON	120	11	1487	250	181
COLUMBIA	87	26	1276	3	167
GREENVILLE	67	31	1115	151	107
S.DAK. ABERDEEN	65	9	420	61-	10
HURON	65	5	606	148	107
RAPID CITY	51	15	546	46-	148
SIOUX FALLS	51	12	585	125	57
TENN. CHATTANOOGA	92	6	1074	75	81
KNOXVILLE	103	6	1025	67	12
MEMPHIS	105	14	1260	319	0
NASHVILLE	81	24	1021	14	48
TEXAS. ABILENE	157	17	1576	112-	163
AMARILLO	108	10	1111	241	41
AUSTIN	155	14	1759	54	106
BEAUMONT	138	9	1496	59	76
BROWNSVILLE	156	16	2345	72	170
CORPUS CHRISTI	141	3	1926	89-	158
DEL RIO	139	15	1717	333-	518
EL PASO	128	9	1517	203-	97
FORT WORTH	157	10	1537	58-	406
GALVESTON	143	10	1710	29	101
HOUSTON	145	12	1861	183-	46
LUBBOCK	101	4	1220	184-	174
MIDLAND	139	13	1317	26-	15
SAN ANGELO	135	10	1289	342-	287
SAN ANTONIO	151	11	1786	7-	166
VICTORIA	141	1	1824	7-	85
WACO	154	3	1653	1-	121
WICHITA FALLS	142	12	1568	38-	187
UTAH SALT LAKE CITY	105	14	670	127	62
VT. BURLINGTON	67	28	392	129	84
VA. LYNCHBURG	71	6	774	86	63
NORFOLK	86	1	1035	175	51
RICHMOND	90	5	970	149	82
ROANOKE	71	5	703	69	12
WASH. BUILLAYUTE	0	0	1	7-	10
SEATTLE-TACOMA	10	4	41	37-	7
SPOKANE	51	11	103	127-	67
WALLA WALLA	61	10	428	62-	5
YAKIMA	47	2	236	71-	8
W.VA. BECKLEY	28	7	340	32-	6
CHARLESTON	68	12	685	6	65
HUNTINGTON	63	8	705	9	21
PARKERSBURG	40	30	574	77-	19
WIS. GREEN BAY	24	16	258	6-	45
LACROSSE	42	14	488	30-	257
MADISON	19	23	328	40-	100
MILWAUKEE	8	34	218	49-	89
WYO. CASPER	55	1	340	67	28
CHEYENNE	56	7	533	59-	76
LANDER	56	7	528	50-	4
SHERIDAN	41	8	257	10-	7


COOLING DEGREE-DAYS FOR THE WEEK
PERCENT DEPARTURE FROM NORMAL (1941-1970)
JUL 28 AUG 3 1981
BASED ON PRELIMINARY TELEGRAPHIC REPORTS


COOLING DEGREE-DAYS ACCUMULATED FROM JAN. 1, 1981
PERCENT DEPARTURE FROM NORMAL (1941-1970)
SUNAUG 3 1981
BASED ON PRELIMINARY TELEGRAPHIC REPORTS


COOLING DEGREE-DAYS ACCUMULATED FROM JAN. 1, 1981
PERCENT DEPARTURE FROM 1980
SUNAUG 3 1981
BASED ON PRELIMINARY TELEGRAPHIC REPORTS

National Agricultural Summary

July 27 - August 2, 1981

HIGHTLIGHTS: Heavy rainfall in parts of the North Central States delayed fieldwork, but helped restore soil moisture supplies. Harvesting of small grains was again delayed in Missouri. Timely rainfall in the Southeast helped relieve dry conditions, although more moisture is needed for good crop development. Farmers in North Central States generally had less than 4 days suitable for fieldwork. In the West, up to 6 days were available. Soil moisture supplies were adequate to surplus in Pennsylvania, Missouri, and West Virginia; very short to short in Georgia and Mississippi; and short to adequate elsewhere. General rainfall in the eastern two-thirds of the Nation improved supplies, but more is needed in most areas. Corn was in fair to mostly good condition; 20% of the crop was in or past the dough stage. Harvesting became more active in the South. Soybeans were in fair to mostly good condition. Blooming was 64% complete and 29% of the acreage had set pods. Winter wheat combining was 86% complete. Harvesting was finished as far north as Kansas. Eleven percent of the spring wheat was combined. Cotton condition was fair to good. Boll set was 73% complete. Harvesting started in the Lower Valley of Texas. Grain soyghum was 48% headed. In Texas, harvesting was 43% complete. Rice was 49% headed. Harvesting centered along the gulf coast of Texas and Louisiana. Peanuts were in fair to good condition. Tobacco harvesting became more active. Apple harvest moved into the Northwest. Peach harvests neared completion in Southern areas and became more active in the North. Pastures and ranges were in fair to good condition except in parts of the Southeast and the Southwest where conditions were poor to fair because of dry weather. Recent rains and cooler weather should improve conditions and promote grass growth. Dry weather in the West increased risk of range fires.

CORN: Corn was in fair to mostly good condition, except in Georgia where it was poor to fair because of dry weather stress. In the 17 major producing States, 20% of the crop was in or past the dough stage, compared with 26% last year. Progress in Indiana and Ohio lagged the average by 15 and 10 points, respectively, due to late planting. In the South, harvesting became more active, reaching 25% complete in Georgia and 14% in Alabama.

SOYBEANS: Soybeans were in fair to mostly good condition except in parts of the Southeast. Poor to fair conditions were reported in Georgia due to the extremely dry weather. However, rainfall during the week will benefit the crop. Blooming became more widespread, reaching the 64% mark in the 18 major producing States, 7 points behind a year earlier. Fields in all States were setting pods--set was 29% complete, compared with 36% last year. In Indiana, pod set was 30 points behind average and, in Ohio, podding lagged the average by 40 points.

SMALL GRAINS: In the 15 major producing States, winter wheat combining was 86% finished, 2 points behind last year. Harvesting was finished as far north as Kansas and nearing completion in Nebraska. Producers in the Corn Belt started plowing land for the 1982 crop. Heavy rains continued to delay the Missouri harvest. Spring wheat combining in the five major producing States reached 11% complete, compared with 21% last year and the 17% average. Progress was behind normal in all States except Idaho. Dry weather is needed for harvesting operations.

COTTON: Cotton was generally in fair to good condition, although the Georgia crop rated only poor to fair. Boll set was ahead of average in all States except Georgia and Oklahoma. In the 14 major States, 73% of the acreage had set bolls. Bolls were beginning to open in parts of the Southeast, with up to 8% opened in Georgia. Harvesting started in the Lower Valley of Texas. Cotton showed excellent growth in Arizona with development generally 3 weeks ahead of normal.

OTHER CROPS: Grain sorghum was 48% headed in the seven major States, compared with 53% last year. Harvesting in Texas reached 43% complete, equal to normal progress. Texas growers were almost finished with harvest in the Lower Valley and harvesting moved into full swing in the Blacklands.

In the five major producing States, rice heading was 49% complete, 4 points ahead of last year. Harvest centered along the gulf coast in Texas and Louisiana. Combining in Texas reached 33%, lagging recent years. Harvesting in Louisiana was 19% finished.

Peanuts were in fair to good condition. Pegging was virtually complete in Georgia and harvesting had started in Mississippi.

Tobacco harvesting was 52% finished in Georgia, 49% in South Carolina, and was just starting in Tennessee. Growers in most areas continued topping plants.

Six percent of the Idaho potatoes had turned color. Growers in New England applied insecticides. Early potatoes were harvested in Michigan, Wisconsin, Washington, and on Long Island.

FRUITS AND NUTS: Apple harvests became more active in the Pacific Northwest and in the Northeast. Peach harvests neared completion in southern areas and became more widespread in northern areas. Sweet and tart cherry harvests were virtually finished in Michigan but remained active in Oregon. The Northwest pear harvest should begin soon.

Condition of Florida citrus groves improved in most areas. New foilage was showing and new crop fruit was developing well. Caretakers were busy hedging and pruning. California growers harvested peaches, pears, and early apples.

VEGETABLES: Farmers in northern production areas harvested sweet corn, tomatoes, snap beans, cabbage, onions, and cucumbers. Southern growers provided some markets with limited supplies of vegetables and melons. However, most activity centered on preparation for the fall season. California was supplying the widest variety of vegetables.

PASTURES AND LIVESTOCK: Pastures and ranges were in fair to good condition except in the Southwest and parts of the Southeast. Dry weather in these areas resulted in poor to fair conditions. However, recent rainfall and cool temperatures should improve conditions and promote growth of grasses. Dry weather in the West increased the risk of range fires.

CROP PROGRESS FOR WEEK ENDING AUG 2, 1981

CORN % DOUGH

	1981	1980	AVG.
COLO	8	10	NA
GA	99	96	NA
ILL	40	58	43
IND	15	30	30
IOWA	14	15	15
KANS	25	20	30
KY	20	22	20
MICH	5	10	8
MINN	1	3	8
MO	36	44	32
NEBR	15	25	NA
N C	82	79	NA
OHIO	10	20	20
PA	4	3	3
S DAK	0	0	0
VA	58	39	NA
WIS	6	0	0
17 STATES	20	26	NA
EXCL. STATES WITH NA	17	23	20

THESE 17 STATES PRODUCED 93% OF THE 1980 CORN CROP.

NA - NOT AVAILABLE

SOYBEANS % BLOOMING

	1981	1980	AVG.
ALA	60	53	54
ARK	31	32	NA
GA	60	48	NA
ILL	77	88	82
IND	45	85	85
IOWA	91	88	90
KANS	50	55	NA
KY	38	60	55
LA	68	58	67
MICH	65	55	50
MINN	86	93	91
MISS	72	67	66
MO	45	70	56
NEBR	85	90	NA
N C	51	36	NA
OHIO	60	80	80
S C	42	40	43
TENN	58	62	60
18 STATES	64	71	NA
EXCL. STATES WITH NA	67	76	74

THESE 18 STATES PRODUCED 95% OF THE 1980 SOYBEAN CROP.

NA - NOT AVAILABLE

SOYBEANS % SETTING PODS

	1981	1980	AVG.
ALA	33	29	NA
ARK	21	14	NA
GA	27	19	NA
ILL	35	55	48
IND	10	35	40
IOWA	61	59	59
KANS	10	10	30
KY	10	20	15
LA	42	34	NA
MICH	15	15	20
MINN	31	44	44
MISS	30	24	24
MO	16	27	23
NEBR	35	60	50
N C	14	0	NA
OHIO	20	50	60
S C	9	4	7
TENN	24	22	16
18 STATES	29	36	NA
EXCL. STATES WITH NA	30	40	40

THESE 18 STATES PRODUCED 95% OF THE 1980 SOYBEAN CROP.

NA - NOT AVAILABLE

WINTER WHEAT % HARVESTED

	1981	1980	AVG.
CALIF	99	97	NA
COLO	92	95	95
IDAHO	14	8	9
ILL	99	100	100
IND	100	100	100
KANS	100	100	100
MO	81	100	100
MONT	15	25	25
NEBR	98	100	98
OHIO	100	99	99
OKLA	100	100	100
OREG	31	29	NA
S DAK	91	100	85
TEX	100	100	100
WASH	21	26	33
15 STATES	86	88	NA
EXCL. STATES WITH NA	87	89	89

THESE 15 STATES PRODUCED 88% OF THE 1980 WINTER WHEAT CROP.

NA - NOT AVAILABLE

SPRING WHEAT % HARVESTED

	1981	1980	AVG.
IDAHO	7	3	0
MINN	8	20	21
MONT	5	5	10
N D	4	11	8
S DAK	44	77	48
5 STATES	11	21	17

THESE 5 STATES PRODUCED 92% OF THE 1980 SPRING WHEAT CROP.

COTTON % SETTING BOLLS

	1981	1980	AVG.
ALA	94	77	72
ARIZ	99	94	96
ARK	99	98	91
CALIF	80	45	NA
GA	97	99	99
LA	95	93	91
MISS	80	86	73
MO	69	83	66
N MEX	90	85	65
N C	78	78	NA
OKLA	25	20	25
S C	100	96	90
TENN	75	89	63
TEX	66	75	NA
14 STATES	73	74	NA
EXCL. STATES WITH NA	80	80	74

THESE 14 STATES PRODUCED 99% OF THE 1980 COTTON CROP.

NA - NOT AVAILABLE

RICE % HEADED

	1981	1980	AVG.
ARK	30	21	NA
CALIF	15	10	NA
LA	79	77	77
MISS	40	33	34
TEX	98	100	NA
5 STATES	49	45	NA
EXCL. STATES WITH NA	68	64	65

THESE 5 STATES PRODUCED 98% OF THE 1980 RICE CROP.

NA - NOT AVAILABLE

SORGHUM % HEADED

	1981	1980	AVG.
COLO	23	19	NA
KAND	15	20	25
MO	45	57	50
NEBR	60	70	50
OKLA	50	60	40
S DAK	26	39	27
TEX	79	80	NA
7 STATES	48	53	NA
EXCL. STATES WITH NA	32	40	35

State Summaries of Weather and Agriculture

These summaries provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Weather and Crop Bulletins published each Monday by SRS State Offices in cooperation with the National Weather Service.

ALABAMA: Temperatures about normal. Rainfall scattered, from 0.25 to over 2.00 in.

Fieldwork: 5.5 days. Activities: Row crop cultivation; scouting, treating row crop pests; harvesting fruits, vegetables, corn. Corn: Dented 86%, 73% 1980, 65% average; mature 62%, 44% 1980; harvested 14%. Soybeans blooming 60%, 53% 1980, 54% average, setting pods 33%, 29% 1980. Cotton setting bolls 94%, 77% 1980, 72% average. Peanuts pegging 100%, 81% 1980. Conditions: Cotton, corn, soybeans, peanuts good, sorghum, pastures fair.

ALASKA: Showers persisted through most of Rail Belt. Most farmers had up to 2 days suitable for haying. Few areas up to 5 days suitable. First cutting hay gained momentum some areas. Overall activity remained limited. Second crop hay gener-

ally good condition. Small grains 50% dough stage Early seeded fields turning color. Condition oats and barley generally good. Cabbage, leaf and head lettuce, other grains good supply, although wet conditions slowed development. Potato plants ranged from 12 to 36 in. Soil moisture supplies mostly adequate to surplus.

Tanana Valley: Light rain and cloudy skies prevailed. Matanuska Valley: Heavier rains at times with mostly cloudy skies. Kenai Peninsula: Rain and clouds dominated. Kodiak Island: Mixture of clouds and sun on the Island.

ARIZONA: Monsoons dominated weather eastern two-thirds of State, locally very heavy rains, some flash flooding. Western third remained mostly sunny, hot, dry. Temperatures ranged 6° above normal west, 4° below southeast.

Cotton excellent progress, 3 weeks ahead normal, squaring, flowering, setting bolls increasing rate, 99% plants setting bolls compared 94% last year. Sorghum progress good, earliest plantings at maturity, later plantings all stages. Sugarbeet harvest rapidly winding down. Corn for grain doing well. Alfalfa haying active. Harvest honeydews virtually complete. Watermelon harvest active, rapidly winding down. Land preparations, planting late fall, early winter vegetables, melons, active. Citrus groves mostly good condition, new crop fruit, sizing rapidly, lemon ring picking expected 2 to 3 weeks. Southwestern Deserts poor to fair, water supplies, soil moisture short to adequate. Mid-to-higher elevations fair to good, adequate soil moisture, water supplies. Cattle fair to good, sheep good.

ARKANSAS: Mild week. Below average temperatures. Light rainfall. Highest temperature 98°, lowest 57°. All departures from normal 0 to -6°. Most rainfall 5.33 in., least zero.

All crops good condition. Rice headed 30%, 21% 1980. Soybean blooming 31%, 32% 1980; setting pods 21%, 14% 1980. Cotton setting bolls 99%, 98% 1980, 91% average. Six days suitable for fieldwork. Grains rated good condition. Soil moisture supplies mostly adequate. Forage cover on pastures slightly above average. Livestock good condition.

CALIFORNIA: Departures of temperatures from normal were mixed virtually Statewide. The departures were narrowly mixed, only a few degrees cooler or warmer. While daytime highs were above normal early in the week, they cooled to slightly below normal by week's end. A disturbance in upper levels of the atmosphere brought the cooler air and higher elevations in the Sierra cooled to near freezing overnight. Ideal weather conditions.

Field crops doing well. Wheat and barley harvest 99% complete. Few scattered fields remaining. Rice doing well. Cotton developing rapidly. Bolls set 80%. Beans good conditions. Safflower harvest begun. Sugarbeets developing well. Harvest nearly complete in the Imperial Valley. Early planted corn at dough stage. Gravensteins continue Sebastopol, other apples begin two weeks. Avocado demand poor. Date packing continues Desert. Grapes doing well, increasing Fresno. Some western grapeleaf skeletonizer damage Selma, Clings continue, undersize, maturity problems. Fresh peaches increase slightly. Pears slow River District, underway Lake, Mendocino. Valencias fair to poor southern, fair to good central. Almonds sprayed, splitting. Walnuts some limb breakage, sunburn. Artichokes in light supply. Broccoli, cauliflower, carrot, celery, sweet corn and cucumber harvests continue. Melons (watermelon, cantaloup, honeydew) continue to do well, harvest remains active with quality good. Dry market onion harvest declining. Green pepper harvest peaking. Summer potato harvest active, good quality harvest of fresh market tomatoes and processing tomatoes active. Quality good. Range fire problems continue most lower elevations. Range condition normal. Livestock, poultry showing effects earlier high temperatures. Stock water supplies continue to be depleted.

COLORADO: Moisture with hot daytime temperatures, set off widely scattered showers and thunderstorms almost daily over the mountains and east. Precipitation was a little above normal for late July.

Winter wheat turned color 100%, 100% 1980, 100% average; ripe 97%, 95% 1980, 100% average; harvested 92%, 95% 1980, 95% average. Barley turned color 80%, 70% 1980; ripe 60%, 57% 1980; harvested 47%, 46% 1980, 43% average. Corn average height 69 in., 65 in. 1980, 71 in. average; silked 67%, 64% 1980, 64% average; dough 8%, 10% 1980. Summer potatoes harvested 10%, 0% 1980. Sorghum emerged 100%, 100% 1980, 100% average; headed 23%, 19% 1980; turned color 1%, 0% 1980. Dry beans flowered 66%, 44% 1980, 57% average. Alfalfa 1st cutting 100%, 100% 1980, 100% average; 2nd cutting 56%, 65% 1980, 64% average. Spring wheat harvested 25%, 27% 1980. Ranges and pastures fair condition. Livestock good condition. Five days suitable for fieldwork.

FLORIDA: Rains began to increase, last days of July, first of August. Summertime, afternoon spotty thunderstorms began at midweek. Rains increased in north as a frontal system moved south to stall along the northern border. Showers stopped over south, central until the 2nd. An easterly wave moving across south brought the most widespread, general rainfall of weeks to central, southern Peninsula. Rains of 1.00 to 2.00 in. common. Stong, gusty winds associated with the thunderstorms created minor damage some sections. Rainfall for week averaged between 1.00 to 2.00 in. Temperatures continued to near or average summertime readings.

Soil moisture adequate west, variable central and southern areas; short most of north and some central areas. Corn harvest active, yields variable. Tobacco harvest full swing, yields fair to good. Marketing active. Hay cutting continues, yields below normal for early cuttings. Soybeans good condition west, poor to fair most other areas. Peanuts mostly fair to good condition. Cotton average growth. Sugarcane fair condition, needs rain. Citrus groves improved most areas, new foliage showing where there has been good care, new crop fruit progressing well. Caretakers very active hedging and topping. Pastures western Panhandle, extreme south and some south central areas in good condition. Mostly poor to fair elsewhere. Some isolated areas in poor condition. Cattle mostly fair to good. Land preparation fall vegetables continues very active. Light planting getting underway. Limited amount summer vegetables continues, mostly local markets.

GEORGIA: Hot, but cooler late in week. Temperatures 2 to 4° above normal. Rainfall 0.50 to 1.00 in. north and 1.00 to 2.00 in. south with spotty amounts over 3.00 in. Weekend weather mostly cloudy, mild, highs mainly in 70's and 80's and lows mostly in 60's and 70's. Light rain and thundershowers scattered across State with rainfall amounts averaging 0.50 to 1.00 in.

Soil moisture very short to short, significant improvement over the weekend. Five days suitable for fieldwork. Corn poor to fair, 99% dough, 96% last year, 91% dent, 85% last year, 85% mature, last year 58%, 25% harvested, 14% last year. Soybeans poor to fair, 60% blooming, 48% last year, 27% setting pods, last year 19%. Peanuts fair to good, 100% blooming, 99% last year and average, 98% pegging, 98% last year, 99% average. Cotton poor to fair, 97% setting bolls, 99% last year and average, 8% open, 1% last year, 3% average. Tobacco fair to good, 52% harvested, 56% last year, 70% average. Peaches mostly fair to good, 85% picked, 95% last year, 96% average. Apples mostly fair to good, 24% picked, 18% last

year. Watermelons poor to mostly fair, 87% harvested, 89% last year, 90% average. Vegetables fair. Pecans mostly fair to good. Pastures and hay crops poor to fair. Cattle and hogs fair to good.

HAWAII: Rains continued to fall Hawaiian Chain. However, not sufficient to drought stricken areas on Island of Hawaii. Irrigation restrictions still imposed. Elsewhere, most islands received beneficial rains.

Crop progress was fair to good. Vegetables: Supplies light, leafy crops - Chinese and hed cabbage harvest very low. Bananas: Orchards received beneficial rains. Production light. Papayas: Supplies decreasing seasonably somewhat-rains beneficial most fields. Pineapples: Harvesting active. Sugar: Steady harvesting will continue. Rains some areas eased moisture stress. Pastures: Federal feed assistance still in effect, Island of Hawaii. Conditions poor in drought area. Rains were welcomed on other sectors.

IDAHO: Temperatures ranged from 1 to 5° below normal. High 99° in Mountain Home. Record low 29° at Stanley. Thunderstorms provided most precipitation. Ashton was the high with 0.56 in.

Winter wheat harvest 14%, 7% in 1980 and 9% average. Spring wheat: 7%, 3%, 0%. Barley: 9%, 2%, 4%. Alfalfa hay second cutting: 34%. Mint: 36%. Potatoes: 6% turned color. Water supplies tightening, especially in east.

ILLINOIS: Temperatures 3 to 6° below normal. Precipitation 1.25 to 3.00 in.

Corn condition 24% excellent, 71% good, and 5% fair; 92% silked, 98% 1980, and 91% average; 40% dough, 58% 1980, and 43% average; 8% dented, 10% 1980, and 11% average. Soybeans 77% blooming, 88% 1980, 82% average; 35% setting pods, 55% 1980, 48% average; condition 7% excellent, 77% good, 16% fair. Oats 85% combined, 82% 1980, 81% average. Alfalfa condition 15% excellent, 77% good, 8% fair; second cutting 88% complete, 95% 1980, 89% average; third cutting 13% complete, 18% 1980, 15% average. Pastures 30% excellent, 65% good, 5% fair. Soil moisture 2% short, 54% adequate, 44% surplus. Fieldwork: 2.8 days suitable.

INDIANA: Cool week, rainy in north. Rainfall from 0.40 in. southeast to 1.50 northwest. Central areas 0.80 in. Temperatures from 48 to 92°, 3° below normal.

Fieldwork averaged 3 days. Topsoil and subsoil moisture mostly adequate. Oats 95% combined, 1980 85%, average 80%. Corn, soybeans and pastures fair to mostly good condition. Corn 55% silked, 1980 85%, average 80%. Corn 15% in dough, 1980 30%, average 30%. Soybeans 45% blooming, 1980 85%, average 85%. Soybeans 10% setting pods, 1980 35%, average 40%. Soybeans 18 in. tall, 1980 25 in. Plowing of 1982 wheat land 10% complete, 1980 10%, average 10%. Alfalfa hay 75% cut 2nd time, 1980 85%, average 85%.

IOWA: Week was cooler and wetter than normal. Precipitation was widespread on the 27th, 1st, and 2nd, with locally very heavy rainfall in some areas.

Topsoil moisture: 8% short, 73% adequate, 19% surplus. Subsoil moisture: 28% short, 62% adequate, 10% surplus. Corn silked: 99%, 1980 96%, normal 89%. Corn in or past dough stage: 14%, 1980 15%, normal 15%. Soybeans bloomed: 91%, 1980 88%, normal 90%. Soybeans setting pods: 61%, 1980 59%, normal 59%. Oats harvested: 97% complete, 1980 96%, normal 90%. Second cut alfalfa hay harvested: 91% complete, 1980 91%, normal 88%. Second crop clover hay harvested: 71% complete, 1980 67%, normal 61%. Fieldwork: 3.3 days suitable. Crop conditions: Pasture, hay and soybeans mostly good, corn excellent. Livestock reported to be in mostly good condition.

KANSAS: Temperatures ranged 73 to 78°, 1 to 3° below normal western one-third of State, 3 to 6° below normal elsewhere. Precipitation widespread, 0.50 to 2.00 in. most areas, 2.00 to 3.00 in. northeast with 6.00 to 7.00 in. in 2 counties.

Wheat 100% harvested, 100% last year and average. Corn 80% silked, same as last year; 25% dough, 20% last year, 30% average; 4% dent, 10% last year, 5% average. Soybeans 50% blooming, 55% last year; 10% setting pods, 10% last year, 30% average. Sorghum 15% headed, 20% last year, 25% average. Third cutting of alfalfa 40% complete, same as last year and average. Pasture and range continue good to excellent except west central and southwest where conditions improving but continue poor to fair. Three days suitable for fieldwork.

KENTUCKY: Temperatures averaged around 2° below seasonal normals. Precipitation ranged from slightly less than 0.10 in. in the central section to nearly 2.50 in. in the extreme southeast.

Soil moisture 16% short, 67% adequate, 17% surplus. Most short in north and east. Surplus in west. Corn good to excellent. Over 80% silked or beyond; 20% dough compared to 22% last year and 20% average. Soybeans fair to good, 38% blooming or beyond, last year 60%, average 53%; 10% setting pods, last year 20%, average 15%. Burley tobacco condition variable, mostly fair; 50% blooming and 15% topped. Few fields cut. Limited damage from blue mold, wind and hail. Pasture and hay fields good to excellent.

LOUISIANA: Rainfall Statewide. Temperatures normal to 2° above normal.

Soil moisture short to adequate. Days suitable: 5.5. Corn dough stage 97%, 89% 1980, 93% average; mature 78%, 48% 1980, 58% average; condition good. Rice ripe 33%, 30% 1980, 32% average; harvested 19%, 20% 1980, 15% average; condition good. Cotton setting bolls 95%, 93% 1980, 91% average; condition fair to good. Soybeans blooming 68%, 58% 1980, 67% average; setting pods 42%, 34% 1980; condition fair to good. Sorghum headed 89%, 78% 1980, 84% average; condition good. Sugarcane good condition. Vegetables fair. Sweetpotato harvest 10%, condition good. Peach harvest 97%. Pastures fair to good. Livestock condition good.

MARYLAND AND DELAWARE: Temperatures averaged 1 to 4° below normal. Rain ranged from 1.00 to almost 4.00 in.

Maryland: Corn silked 90%; dough over 50%, last year 70% silked and 30% dough. Soybeans: Bloom 25%, podded 15%, last year 30% bloomed, 20% podded. Hay: 3rd cutting 50%, equal to last year. Second cutting of the hay nearly over. Peaches 30% harvested. Vegetable harvest in full swing. Delaware: Corn 90% silked, dough stage just beginning. Last year 95% silked and 25% dough. Soybeans: 20% bloomed, just starting to pod. Last year 30% bloomed. Third cutting of alfalfa hay 60% completed, last year second cutting of hay nearly complete. Vegetable harvest in full swing.

MICHIGAN: Below normal average temperatures were reported. The only exception was the western half of the Upper Peninsula which had an average temperature 1° above normal. Rainfall amounts of over 1.00 in. fell over the southern portion and part of the central portion. The rest of the State remains dry.

Rains brought relief to the southern regions restoring soil moisture supplies. However, dry conditions still linger in the north. Second cutting of hay active with 50% cut. About 5 days were suitable for fieldwork. Winter wheat 95% harvested, ahead of last year and normal. Close to 35% of the dry beans have set pods, ahead of last year and normal. Pods set on soybeans stand at 15%, 15% last year and 20% normal. Corn 70% silked, 65% last year, 66% normal. Oat harvest underway with 25% in. Summer apples 25% picked. Tart and sweet cherry harvest virtually complete.

Peach and blueberry harvest well underway. Sweet corn, celery and cabbage harvest in full swing. Close to 20% of the cukes for pickles are now in.

MINNESOTA: Temperatures averaged normal north to 5° below normal south. Extremes: 95° at Browns Valley, 41° at Hibbing. Precipitation averaged 0.25 to 0.80 in. below normal southwest and east central through north central and northeast; and near normal elsewhere except locally to 2.00 in. above normal west central. Precipitation total less than 0.50 in. southwest and east central through north central and northeast, and 0.50 to 1.50 in. elsewhere except locally to 2.87 in. west central.

Harvest and development slowed by wet weather. Light rains with cool, humid nights and little sunshine kept fields wet. Many local areas short of moisture. Most crops past point of adverse affects by shortage. Topsoil moisture rated 12% short; 72% adequate, and 16% surplus. Swathed: Spring wheat 29%, 1980 51%, normal 40%; oats 62%, 1980 75%, normal 61%; barley 67%, 1980 84%, normal 62%; winter wheat 85%, 1980 89%, normal 80%; rye 87%, 1980 93%, normal 79%. Combined: Spring wheat 8%, 1980 20%, normal 21%; oats 27%, 1980 42%, normal 37%; barley 39%, 1980 55%, normal 39%; winter wheat 46%, 1980 62%, normal 56%; rye 40%, 1980 58%, normal 53%. Blooming: Soybeans 86%, 1980 93%, normal 91%; sunflowers 56%, 1980 82%, normal 59%. Tasseling: Field corn 93%, 1980 96%, normal 91%. In milk: Field corn 14%, 1980 26%, normal 32%. Setting pods: Soybeans 31%, 1980 44%, normal 44%. In dough: Field corn 1%, 1980 3%, normal 8%.

MISSISSIPPI: Temperatures ranged from 7° below normal to 6° above normal. Extremes: 55 and 99°. Cold front brought strong winds and hail to some areas. Greatest 24-hour rainfall was 1.47 in.

Soil moisture short to very short. Days suitable for fieldwork: 5.9. Cotton 100% blooming, 100% last year, 93% average; 80% setting bolls, 86% last year, 73% average; condition good to fair. Soybeans 72% blooming, 67% last year, 66% average; setting pods 30%, last year and average 24%; condition fair to good. Corn 97% in dough stage, 92% last year; 77% dented, 66% last year; 34% mature, 23% last year; condition good to fair. Rice 40% headed, 33% last year, 34% average; condition good. Sorghum 70% headed, 53% last year. Hay 78% harvested; peaches 74%; sweetpotatoes 3%; watermelons 80%; corn silage 48%; peanuts 5%. Pasture conditions good to fair.

MISSOURI: Heavy rains continued across northern areas, averaging nearly 4.00 in. Central and southern areas averaged 1.00 to 2.00 in. of rain. Temperatures averaged from 5 to 7° below normal.

Fieldwork: 1.9 days suitable. Corn 87% tasseled, last year 100%. Corn 78% silking, last year 93%, normal 74%. Corn 36% in dough stage, last year 44%, normal 32%. Grain sorghum 45% headed, last year 57%, normal 50%. Soybeans 45% blooming, last year 70%, normal 56%. Soybeans 16% setting pods, last year 27%, normal 23%. Wheat 81% harvested, last year 100%, normal 100%. Oats 79% harvested, last year 100%, normal 100%. Alfalfa hay 2nd cutting 85% harvested, last year 100%. Alfalfa hay 3rd cutting 22% harvested, last year 26%, normal 22%. Other hay 79% harvested, last year 100%. Cotton 93% squaring, last year 100%, normal 100%. Cotton 69% setting bolls, last year 83%, normal 66%. Corn and pasture in good to excellent condition. Soybeans and grain sorghum in fair to good condition. Cotton in fair condition. Topsoil moisture supply adequate to surplus.

MONTANA: Severe thunderstorms, with tornado or two, hit portions extreme east late in week. Some storms produced 2.00 in. rain and softball size hail. Violent winds caused damage over areas of northeast and southeast. Precipitation light and widely scattered in west, southwest and north central. Moderate to heavy rains over many areas in northeast and southeast. Temperatures cooler than normal and about 3° below normal. Highest 98° at Miles City, lowest 29° at Wisdom.

Both topsoil and subsoil moisture short to adequate. Fieldwork: 6 days suitable. Current irrigation water supplies mostly average, prospective supplies mostly below average. Progress of small grains in percent compared with last year and normal: Winter wheat turning 45, 35, 30; ripe 40, 40, 45; harvested 15, 25, 25. Spring wheat headed but still green 30, 20, 25; turning 50, 55, 45; ripe 15, 20, 20; harvested 5, 5, 10. Barley headed but still green 25, 20, 20; turning 55, 50, 50; ripe 15, 20, 20; harvested 5, 10, 10. Oats headed but still green 25, 20, 25; turning 45, 45, 40; ripe 20, 25, 25; harvested 10, 10, 10. Second cutting of alfalfa 15% compared with 20% last year and normal. Wild hay 75% cut compared with 70% in 1980 and 65% normal.

NEBRASKA: Temperatures: Near normal Panhandle, 6° below normal central and east. Precipitation: Rainfall plentiful averaging 1.50 to 2.00 in.

Winter wheat 98% harvested, last year 100%, 98% normal. Dryland corn mostly good to fair. Irrigated corn mostly good. Silking 90%, same as last year, normal 85%; dough 15%, last year 25%. Sorghum mostly good; heading 60%, last year 70%, normal 50%. Soybeans rated mostly good; blooming 85%, last year 90%; pods setting 35%, last year 60%, normal 50%. Alfalfa good. Pasture and range feed supplies adequate to poor. Topsoil moisture mostly adequate. Subsoil moisture short to adequate. Days suitable: 2.6.

NEVADA: Cooling trend northwest, but airmass remained very dry across State. Low relative humidity and clear skies produced large temperature variations. This kept mean temperatures near normal despite above normal afternoon readings. Extremes: 109 and 32°.

Small grain maturity pushed by hot, dry weather. Nearly 33% combined. First cuttings alfalfa hay done, second crop nearing halfway point. Second cuttings low tonnage due short water supplies and hot weather.

NEW ENGLAND: Temperatures averaged near normal: Cool early week, warm late week. Precipitation: North, 1.00 to 1.50 in.; south 0.50 to 0.75 in.; southern coast, lighter amounts. Bulk of precipitation occurred 28th.

Fieldwork: 4.9 days favorable. Soil moisture mostly adequate. Hay harvested: First crop, 93%, second crop 30%. Potatoes: Applying insecticides. Oats growing well, turning. Apples: Early varieties harvested, sizing well. Vegetables harvesting, growing well. Cranberries: Fruitworm treatment, good prospects. Raspberries: Harvest peaking, yields variable. Sweet corn approaching harvest. Good conditions: Corn, oats, potato, vegetables, cranberries, raspberries. Fair condition: Apples, blueberries. Grazing adequate.

NEW JERSEY: Temperatures averaged 3 to 4° below normal. Extremes: 47° at Charlotteburg 30th and 93° at Pomona 27th and 29th. Rainfall 0.10 in. north, 0.04 in. central and 0.31 in. south. Heaviest 24-hour total 0.62 in. Bridgeton 27th on 28th. Estimated soil moisture, in percent of field capacity, 49 north, 39 central, and 27 south. Four inch soil temperature averaged: 68 north, 72 central and 72 south. Total sunshine at Trenton from July 27 to August 2 was 75% of possible hours.

Fieldwork: 6.7 days suitable. Areas of central and south critically dry. Irrigation in full use. Summer vegetables continue in good volume. Processing tomato harvest underway. Irish potato harvest moderate to good. Blueberry harvest moderate from the late varieties. Peaches moving in

good volume. Early red and summer cooking apples harvest increasing. Oat combining advancing rapidly. Good hay making weather.

NEW MEXICO: Soil moisture short to adequate. Irrigated crops in good condition and dryland crops and ranges in fair to good condition. Farming activities included hay cutting, irrigating, and cultivating where not interrupted by rain. Cotton remains in good condition and progressing well. Alfalfa in good condition with recent cutting activity limited in some areas due to rainfall. The third cutting progressing towards the north and the fourth cutting just getting underway in the south. Irrigated grain sorghum and corn in good condition. Dryland grain sorghum in fair to good condition. Green chile harvest just getting underway. Onion harvest continuing in the Mesilla Valley. Ranges in fair to good condition. Cattle and sheep in good flesh.

Scattered showers reported daily. Totals mostly below 1.00 in. Temperatures averaged near normal.

NEW YORK: Temperatures from 2 to 8° below normal. Rainfall normal in northern and western areas, subnormal further south.

Corn condition good to excellent. Wheat 80% in, 40% 1980, 64% average. Variable sprouting damage in some areas. Oats 15% combined, under 5% 1980, 14% average. Second cutting dry hay alfalfa 47% done, 39% 1980, 52% average. Third cutting underway. Dry bean condition good. Summer vegetables being harvested in volume. Long Island potato growth good. Early variety peaches being harvested. Some spot picking of early apples.

NORTH CAROLINA: Temperatures: Near normal in the east to 2 to 4° below normal in the Piedmont and Mountains. Precipitation: Near 0 in the northeast to over 5.00 in. in the southeast.

Fieldwork: 5.3 days suitable. Soil moisture: 5% very short, 35% short, 58% adequate, and 2% surplus. Conditions: Pasture fair to mostly good; field tobacco, corn, cotton, peanuts, soybeans, hay, sweetpotatoes, apples, peaches, and truck crops mostly good; Irish potatoes fair to good. Harvest: Flue-cured tobacco 38%, 1980 22%, 32% average; corn for silage 7%, 1980 2%, 1% average; peaches 70%, 1980 71%, 76% average; hay 75%, 1980 70%, 74% average. Phenological stages: Cotton squared 97%, 1980 92%; cotton setting bolls 78%, 1980 78%; corn silked 99%, 1980 93%; corn dough stage 82%, 1980 79%; corn dent stage 61%, 1980 51%; corn matured 21%, 1980 14%; soybeans blooming 51%, 1980 36%; soybeans setting pods 14%, 1980 0.

NORTH DAKOTA: Moderate to heavy rains many areas. Severe weather in southern half. Only northwest and central received below normal rainfall. Amounts near 1.00 in. common southern half. Temperatures below normal. Coolest northeast with average of 67°. Extremes from 95° south central to 41° northwest.

Small grain harvest delayed by showers, especially in southern and central areas. Harvest becoming general in north this week. Lower than anticipated yields common in early harvested fields. Poor filling in some heads due to extreme heat in early July. Stands heavy, however. Quality variable but early test weights generally below normal. Several weeks of dry weather needed to complete harvest and avoid further quality problems. Soil moisture supplies slightly improved. Topsoil moisture short 35% of State, last year 87, average 70. Row crops generally good condition but insects and disease causing concerns, especially midge in sunflower. Development lagging behind average. Percents combined through with last year and average: Hard red spring wheat 4, 11, 8; durum 1, 5, 3; barley 21, 21, 20; oats 11, 18, 13; winter wheat 31, 61, 42; rye 36, 58, 48. Percents bloom or beyond with last year and average: Sunflower 27, 35, 47; potatoes 91, 81, 91; flax 85, 73, 84. Twenty-three percent of dry beans full sized pods, last year 30, average 41.

OHIO: Wet weather continued into middle of week. Rainfall exceeded 0.50 in. at most locations and was over 1.00 in. at 4 stations. Last part of week virtually rainfree. Average temperatures below normal. Maximum values on 29th remained in low 70's in most places. Lows fell into 40's at some locations. Growing degree days as much as 10 to 20 below normal.

Corn rated fair to good. Below normal temperatures limited growth but helped pollination. Corn root worm infestation heavy in some fields north central area. Soybeans rated fair to good. Mexican bean beetles present, but bean leaf beetles expected to do more damage. Corn silked 60%, 85% 1980, 80% average. Corn in dough 10%, 20% 1980, 20% average. Soybeans blooming 60%, 80% 1980, 80% average. Soybeans pods setting 20%, 50% 1980, 60% average. Oats harvested 80%, 60% 1980, 65% average. Alfalfa harvested, 2nd cut 70%, 70% 1980, 80% average. Other hay harvested, 2nd cut 50%, 50% 1980, 55% average. Days favorable: 4.5. Pasture condition good. Soil moisture 11% short, 80% adequate, 9% surplus.

OKLAHOMA: Rainfall received Statewide. Average from 0.90 in. Panhandle to 5.32 in east central division. The largest reported total, 12.8 in. at Sallisaw, east central division.

Cool temperatures and timely rains improved crop and pasture conditions. Row crops good to fair condition. Soil moisture supplies shortest Panhandle and south central areas. Wheat harvested: 100%, 100% 1980, 100% average. Sorghum grain heading: 50%, 60% 1980, 40% average. Cotton setting bolls: 25%, 20% 1980, 25% average. Days suitable for fieldwork: 4.7.

OREGON: Warmest weather this year. Temperatures 95 to 100° for couple of days, then highs in 70's to 80's. Very little rain; only 0.10 in. in Cloverdale and 0.60 in. in Enterprise.

Soil moisture supplies mostly short to adequate except adequate in north coastal and central areas. Winter wheat harvest 31% complete; 29% a year ago. Yields above average in east; below in west. Barley, seed crops, hay and peppermint harvest underway. Tart cherry harvest continuing, sweet cherries near completion. Apricots, apples, peaches being picked. Bartlett pears two weeks away. Berry harvest continuing. Cranberries good, but some bogs beginning to suffer from drought. Filbert worm moth sprays ready to go on. Potato and snap bean harvest continuing. Sweet corn behind. Watermelons a week away. Livestock, range and pasture conditions good, but ranges beginning to dry rapidly. Fire hazard high.

PENNSYLVANIA: Cool, dry and sunny most of the week. Temperatures averaged 2 to 5° below normal with daily highs mostly in the 70's and 80's and lows in the 50's and 60's. Extremes: 87 and 40°. Statewide, cold frontal showers 28th plus rain early 27th morning in the south central provided weekly totals of less than 0.25 in. most eastern half to 1.00 to 2.40 in. west.

Four days suitable. Topsoil moisture adequate to surplus. Activities: Harvesting small grains; baling straw; making hay; topping tobacco; harvesting vegetables; harvesting apples and peaches; clipping pastures. Average corn height 74 in.; last year 61 in. Barley 94% harvested; last year the harvest was virtually complete. Wheat 83% harvested; last year 89% harvested. Oats 39% harvested; last year 57% harvested. Second cutting alfalfa 69% complete; last year 74%. Feed from pasture average to below average.

PUERTO RICO: Island average rainfall 1.17 in. or

0.38 in. below normal. Temperatures averaged about 83 to 82° on Coasts and 77 to 76° Interior Divisions. Extremes: 95 and 60°.

SOUTH CAROLINA: Cloudy, wet, warm weather during most of the week. Highs in the 90's first two days, cooler air moved in on 29th dropping overnight temperatures in the 60's and upper 50's.

Soil moisture adequate. Five days available for fieldwork. Corn fair to good condition; 93% dough stage, 89 year ago, 90 average; 58% mature, 40 year ago, 50 average; insect pressure increasing. Cotton good condition, growers finding it hard to maintain regular spray schedule. Earliest soybeans blooming reached 42%, 40 last year, 43 average; setting pods 9%, 4 year ago, 7 average; condition fair to good. Difficult to control corn earworm. Tobacco 49% harvested, 33 last year, 58 average; crop looking good. Peaches good condition, some orchards irrigated in Piedmont. Ridge finishing Jeffersons, starting Monroes and Marsuns. Statewide 81% harvested, 81 last year, 85 average. Watermelons fair condition, 89% harvested, 88 last year, 88 average. Cantaloups fair condition, 91% harvested, 85 last year.

SOUTH DAKOTA: Precipitation over most of State. Heaviest in central, over 3.00 in. Temperatures 4 to 5° below normal. Temperatures increased during weekend. Extremes: 100 and 44°.

Topsoil moisture adequate over most of State. Critically short in parts of north central, central and east central. Some shortages in virtually all districts. Subsoil moisture mostly short. Critically short in area that includes parts of north central, central and east central. Adequate in parts of west central, central and north central. Small grain harvest behind normal for most grains due to wet weather. Three days suitable. Row crop condition improved but below normal. Conditions as of normal: Corn 87%, soybeans 90%, sorghum 90%, sunflowers 84%. Range and pasture condition also improved but is only 66% of normal. Second crop alfalfa 44% cut, wild hay harvest 53%. Winter wheat harvested 91%, 1980 100%, average 85%. Winter rye harvested 64%, 1980 92%, average 77%. Oats harvested 64%, 1980 86%, average 64%. Spring wheat harvested 44%, 1980 77%, average 48%. Barley harvested 65%, 1980 89%, average 68%. Corn tasseled 83%, 1980 85%, average 76%. Corn silked 57%, 1980 63%, average 62%. Sorghum headed 26%, 1980 39%, average 27%.

TENNESSEE: A cold front brought scattered rainshowers during early part of the week and again over the weekend. Temperatures were cooler, averaging 2 to 3° below normal in the west and middle and near normal in the east. Rainfall averaged 0.34 in. in the west and 0.50 to 0.75 in the middle and east.

Fieldwork: 4.2 days suitable. Soil moisture adequate. Soybeans blooming 58%, 1980 62%, average 60%. Soybeans setting pods 24%, 1980 22%, average 16%. Weed spraying continues. Insect population light but the three-cornered alfalfa hopper showing up in middle areas of State. Cotton 99% squaring, 98% 1980, 95% average. Cotton setting bolls 75%, 1980 89%, average 63%. Corn 91% silked, 1980 92%, average 90%. Corn in dough stage 57%, 1980 78%, average 53%. Corn in dent stage 20%, 1980 18%, average 10%. Fall armyworm, borers and earworms still causing problems in late planted fields. Burley tobacco 45% topped. Several farmers have already started to cut tobacco. Pastures and livestock remain in good condition. Lespedeza hay harvest 26%, 1980 13%, average 15%. Blossom end rot and blight on tomatoes reported. The green June beetle has been causing more widespread damage than usual and the Japanese beetle still causing problems in eastern areas. Home gardens have produced good crop this year.

TEXAS: Weather: Tropical low pressure system triggered scattered showers, thunderstorms first of week. Other scattered showers, thunderstorms developed mid and latter week. By latter week persisting upper level high pressure system dominate, resulting decrease showers, return to hotter temperatures. Average temperatures 2 to 4° above normal. Average rainfall generally 0.33 to 0.50 in. below the normals.

Commercial vegetables: Rio Grande Valley, land preparation completed, planting fall season crops underway. Conditions good. San Antonio-Winter Garden area, preparation for planting continued. Some cucumbers for pickles being harvested. Central Texas, watermelon harvest continued. Sweetpotatoes continued to progress. Trans-Pecos region harvest of onions nearing completion. Yields good, supplies plentiful. Cantaloup harvest continued. High Plains, onion, potato harvest active. Peach harvest continued North Texas, activity in East, Central Texas winding down. Pecan shells beginning to harden. Moisture needed to help development.

Range and livestock: Scattered showers provided only temporary relief from hot, dry conditions. Range, pasture condition continues to deteriorate. Despite reduction of grazing, livestock remain in good condition.

Crops: Scattered showers across Panhandle revived many dryland crops, yield potential improved some cotton, sorghum fields. Cotton harvest Lower Valley making good progress; yields some early fields been excellent. Blacklands boll weevils, bollworms damaging squares, young bolls. Southern High Plains bollworm activity light to moderate. High Plains many dryland stands started normal summer shedding of squares. Statewide, reported condition 9% excellent; 60% good; and 31% fair. Sorghum fields heading High Plains; recent rains help grain development. Blacklands harvest full swing, record yields reported some areas. Harvest almost complete Lower Valley. Reported condition Statewide 17% excellent; 71% good; 11% fair; and 1% poor. Corn harvest good progress South Central Texas. Yields good considering earlier lodging. Statewide, reported condition 24% excellent; 64% good; and 12% fair. Soybeans set pods Panhandle. Stands along Coast blooming, but pod set poor. Rice harvest gaining momentum; yields below average some areas. Cotton squaring 92%, 99% 1980. Cotton setting bolls 66%, 75% 1980. Cotton open bolls 8%, 13% 1980. Cotton harvested 2%, 5% 1980, 2% average. Rice headed 98%, 100% 1980. Rice turning color 81%, 100% 1980. Rice harvested 33%, 46% 1980, 40% average. Sorghum headed 79%, 80% 1980. Sorghum turning color 64%, 65% 1980. Sorghum mature 53%, 61% 1980. Sorghum harvested for grain 43%, 55% 1980, 43% average. Corn for grain harvested 4%, 22% 1980, 11% average. Soybeans planted 99%, 100% 1980, 100% average. Sunflowers planted 99%, 100% 1980, 100% average.

UTAH: Few isolated light showers. Accumulated amounts moisture generally light. Average temperatures continued generally above normal ranging between 1° below normal and 6° above.

Soil moisture deficit dryland fields and ranges increasing. Large number of range fires due to heavy spring growth and large number of dry thunderstorms. Risk continues high.

Major farming activities continued to be irrigating, harvesting second crop hay, and combining small grains. Second crop hay 75% cut. Third crop will be light in some areas because of short water supplies. Winter grain harvest past halfway mark. Spring grain combining active. Early peaches and summer apples beginning to appear on market.

VIRGINIA: Continued hot temperatures and scattered showers and thunderstorms. Highs in 80's and some 90's; lows from upper 50's to mid 70's.

Precipitation around 0.75 in., with a few localities over 2.00 in.

Topsoil moisture improved to 66% adequate, 32% short and 2% surplus. The southeast and south were the only regions rated mostly short. Days suitable for fieldwork: 4.7. Corn 97% silked and 58% in dough, compared with 84% silked 1980, 42% dough 1980. The crop still rated good to excellent, as were soybeans, tobacco, peanuts, all hay and pastures. Flue-cured tobacco 17% harvested, 3% 1980, 7% average; 10% of the fire-cured tobacco harvested, compared with none in 1980 and none for average. Peaches 44% picked and apples 4%. Hay cutting remains active. Some corn cut for green chop or silage in central and southeast. Aphids heavy in some southeast flue-tobacco and leafhoppers still active in north. Tomato harvest underway on Eastern Shore.

WASHINGTON: West: Near normal average temperatures but about 0.10 in. below normals for rainfall. Strawberry harvest completed. Raspberry harvest past peak while blueberries approaches peak harvest. Harvest of fresh market vegetables continued. Green pea harvest near 30% complete. Vegetables mostly in good condition with some problems reported in cucumbers and snap beans. Green chopping and baling of hay continues. Hay supplies adequate. Soil moisture ranged from poor to adequate.

East: Average temperatures were 1° below normals with several stations reporting just a trace or less. Apricot and peach harvests continued. Cherries were approaching completion. Apples continued to size with picking of early varieties underway. Pears in good condition. Norgold and early potatoes were dug in southern counties. Other crops being harvested included vegetables, mint, dry peas, grass seed, and hay. Combining of winter wheat and spring barley increased in activity. Crop prospects continued to be average or above.

WEST VIRGINIA: Temperatures below normal. Extremes: 34 and 93°. Precipitation widespread. Range 0.21 to 3.83 in.

Soil moisture adequate to surplus. Days worked: 3.6. Main activities: Making hay, gardening, spraying and clipping pastures. Wheat mostly good to fair condition; 82% harvested; last year 71% harvested. Barley good to fair condition; 96% harvested; last year 88% harvested. Oats good to fair condition; 48% harvested; last year 42% harvested. Corn good to fair. Pastures and hay good to fair. Hay 1st cutting 91%, 85% of normal; last year 96% complete; 2nd cutting 30%, 73% of normal; last year 36%, 83% of normal. Tobacco good to fair. Potatoes good to fair. Gardens fair to good. Fruit poor to fair. Peaches 18% harvested, 74% of normal; last year 29%, 69% of normal.

WISCONSIN: Unseasonably cool weather penetrated as temperatures averaged 5° below normal. Highs were mostly in the 80's and lows were mostly in the 40's. Various stations reported the weekly high of 88° while the cool spot was Lake George which reported 37°. A Canadian high pressure area moved over the State early in the week which brought the cool temperatures. Rainfall covered much of the State 27th and 28th with amounts ranging from 0.25 to 2.00 in. Rainfall has been in short supply in northeast which includes the following counties: Outagamie, Brown, Sawano, Oconto, Marinette, Door and Kewaunee.

Fieldwork: 5 days suitable. Weather delayed small grain and second crop hay harvest. Oat harvest 18% complete, 17% 1980, 13% average. Oats ripe in many areas but need more favorable harvesting weather. Second crop hay harvest continuing and 50% complete, this compares to a 1980 average of 65% and an average of 40%. Concerns about hay yields prevalent in many areas. The corn crop continues to make excellent progress. The 1981 crop 64% silked, 76% 1980, 58% average. Canning vegetable harvest has begun; sweet corn, green beans and lima beans. Pea harvest slowly drawing to a close. Topsoil moisture supplies rated 24% short, 66% adequate, and 10% surplus. Most concerns about moisture supplies from northeast which has experienced dry weather for the past six weeks.

WYOMING: Temperatures below normal. Highest temperature 98° at Dull Center, Redbird and Torrington. Lowest temperature 35° at Moran. All stations above normal precipitation except Moran. Greatest amount 2.65 in. at Sundance.

Topsoil moisture adequate 55% State. Average 6 days suitable for fieldwork. Winter wheat mature: 95%; year ago 95%; normal 90%. Winter wheat harvested: 55%; year ago 80%; normal 63%. Spring wheat mature: 35%; year ago 50%; normal 38%. Spring wheat harvested: 10%; year ago 30%; normal 18%. Oats mature: 20%; year ago 35%; normal 35%. Oats harvested: 5%; year ago 20%; normal 13%. Barley mature: 50%; year ago 45%; normal 51%. Barley harvested: 15%; year ago 20%; normal 18%. Corn tasseled: 55%; year ago 50%; normal 61%. Corn silked: 5%; year ago 35; normal 34%. Potatoes: 65% in bloom; 60% year ago, 73% normal. Dry beans: 60% in bloom; 70% year ago; normal 79%. Sugarbeets good condition. Second cutting alfalfa harvested: 15%; year ago 25%; normal 27%. Other hay harvested: 55%; year ago 45%; normal 60%.

International Weather and Crop Summary

HIGHLIGHTS
July 27 - August 2, 1981

EUROPE: Harvest weather improved in the north and northeast; beneficial rains fell in southern England, Romania, and Bulgaria.

USSR: Hot and dry weather again hurt spring-planted crops in southeastern European USSR. Rain impeded grain harvest in western Ukraine.

CHINA: Conditions remained too wet in Manchuria, Sichuan, and along the southern coast.

INDIA: Abundant rain fell across the north; flooding reported in the northeast, but the moisture was generally beneficial.

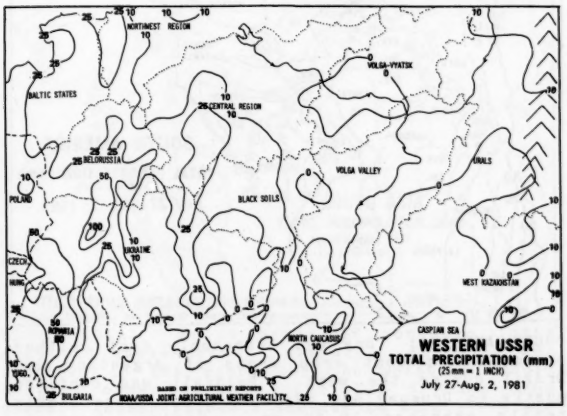
SOUTH AMERICA: Dry, mild weather prevailed with the wheat crop mostly in the semi-dormant period.

SOUTHEAST ASIA: Seasonal rainfall occurred in most areas, favoring crop development.

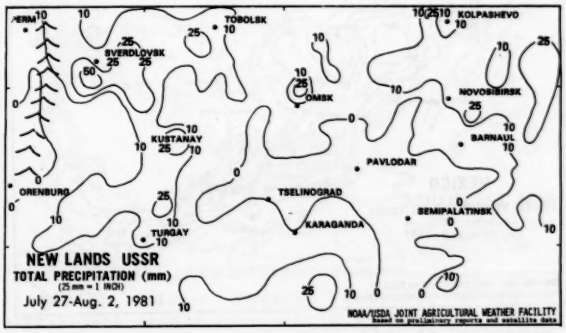
AUSTRALIA: Beneficial rain fell on most wheat areas with the crop in a semi-dormant state.

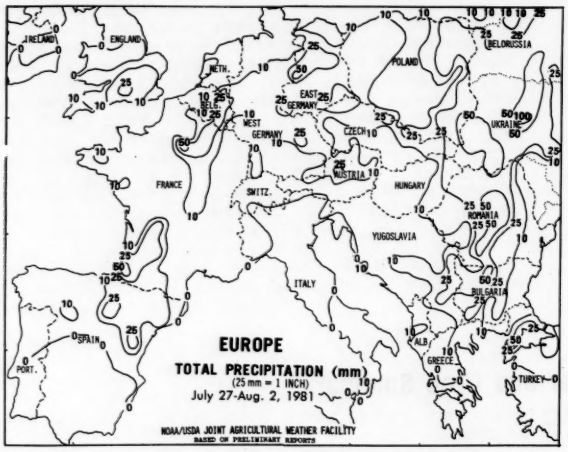
CANADA: Widespread showers continued to aid crop development.

MEXICO: Heavy rain over northwestern watersheds maintained plentiful irrigation supplies for West Coast crops.

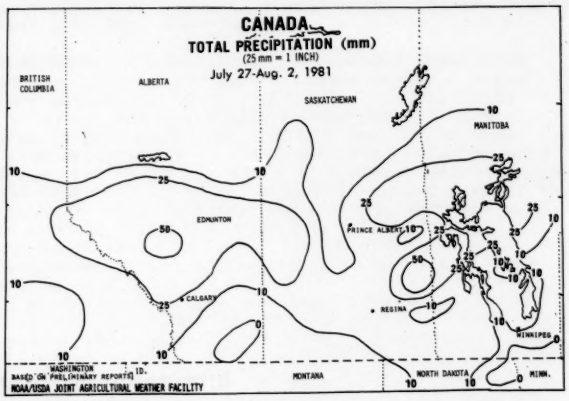


USSR: A nearly stationary frontal system spread hot and dry weather over much of eastern European USSR, while dumping heavy rain in the west. The dry conditions were not quite as extreme as the previous week, but they covered a broader area and persisted longer. The upper Volga Valley escaped the dry weather this time. More favorable weather returned to this eastern area over the weekend, but very little rain fell. Some central and southern areas received moderate rains, but corn had already been damaged in the North Caucasus and eastern Ukraine. Harvesting of small grains progressed rapidly under these conditions. Excessively wet weather in the western Ukraine caused substantial problems for grain harvesting. In the New Lands, relatively wet and warm weather in the west maintained favorable growing conditions. Continued moderate rains in the northeastern New Lands benefited filling of grains, while dry weather prevailed in the southeastern parts. Some early harvesting should be in progress in the south. Temperatures in the eastern New Lands remained slightly below normal.





EUROPE: Drier weather returned to most northeastern countries, improving harvest conditions. Difficulties with harvesting had been reported from nearly all of this area. Only some localized areas now remain too wet. Spring-sown crops in southern England benefited from continued moderate rainfall, although northerly areas turned drier. Some crop areas in Romania and Bulgaria received beneficial rains. Dry weather in late June and much of July had dimmed spring crop prospects somewhat in that area. Temperatures over the region were variable. Most eastern and southeastern countries tended to be cooler than normal, while there were some pockets of above-normal temperatures in France and Spain. Other western areas stayed near normal.



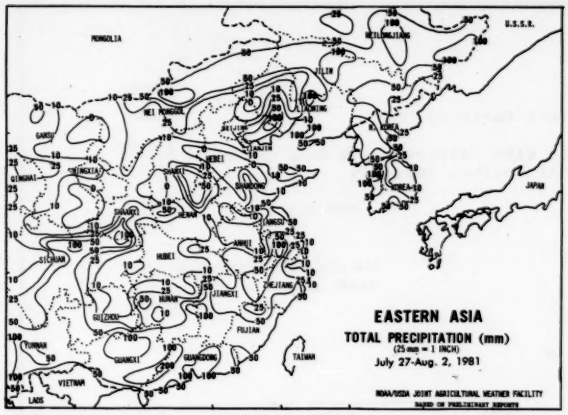
CANADA: Favorable agricultural weather continued in the Prairie Provinces. Nearly all of the spring wheat belt received beneficial moisture from showers associated with a frontal system passing through the region during the middle of the week. Weekly totals generally ranged from 15 to 30 mm, except for locally heavier rainfall in western portions of Alberta and northeastern crop areas of Saskatchewan. Rainfall was minimal, however, in southern Alberta and southwestern Saskatchewan. Temperatures were generally favorable for crop growth, with most cereals in the grain-filling stage. Yield prospects remain good except for some localized pockets of dryness, especially in crop areas of southern Saskatchewan and extreme northwestern Alberta. Overall, crop conditions are much improved over last year.

MEXICO
TOTAL PRECIPITATION (mm)
(25 mm = 1 INCH)
July 27-Aug. 2, 1981
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
BASED ON PRELIMINARY REPORTS AND SATELLITE IMAGERY

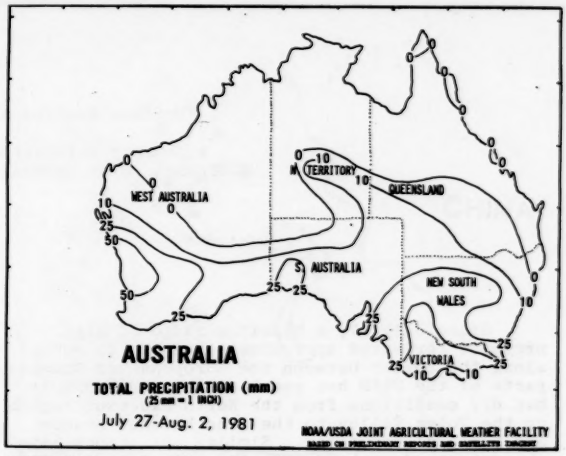
MEXICO: Heavy rains drenched northwestern watersheds, maintaining adequate irrigation water for West Coast cotton, rice, soybeans, and other summer crops. In contrast, citrus in the upper northeast continued to receive subnormal rainfall; non-irrigated orchards have been stressed for several weeks which could result in small fruit. Citrus had beneficial showers from Valles to Jalapa. Most of the southern Plateau corn belt had moderate rains, helpful to the crop in its reproductive period. Northern cotton areas were generally hot and dry, except for showers reducing irrigation needs at Chihuahua and Torreon. Some sugar cane fields around Veracruz had localized torrential rains.

SOUTH AMERICA
TOTAL PRECIPITATION (mm)
(25 mm = 1 INCH)
July 27-Aug. 2, 1981
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
BASED ON PRELIMINARY REPORTS AND SATELLITE IMAGERY

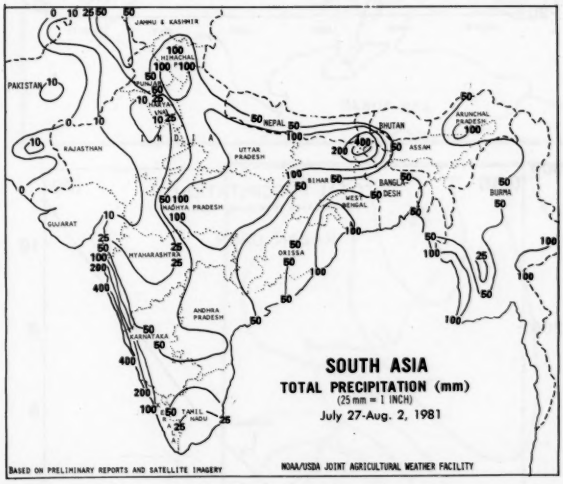
SOUTH AMERICA: Dry and seasonably cool weather prevailed in most crop areas of Argentina and Brazil during the week. Rainfall was confined mostly to Uruguay and adjacent areas where weekly totals averaged 10-30 mm. Winter wheat is generally in a semi-dormant period except in northern portions of Brazil's wheat crop area where the early-seeded crop may have advanced into the grain-filling stage. There have been no indications of potential frost damage to wheat, some of which may have been at the vulnerable flowering stage during the recent cold weather. Temperatures in the coffee area of Brazil remained well above freezing. In Argentina, seasonably dry weather during the past several weeks should not pose any problems for the dormant wheat crop.



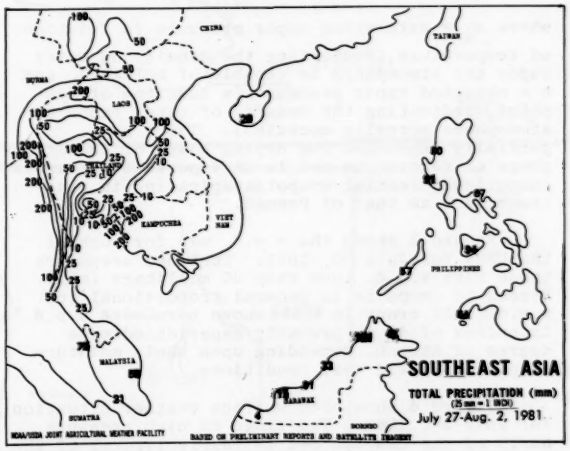
EASTERN ASIA: Above-normal rainfall continued over many parts of China, as weather systems stagnated during the week. Conditions remained unfavorably wet in the Sichuan Valley, eastern portions of the Manchurian Valley, and southern coastal provinces. Inner Mongolia benefited from the moisture, as did most of those areas on the North China Plain which received rain. Some central parts of China remained dry. The rainfall deficit appears to be centered over Hubei, and has persisted since early July. However, irrigation water should be plentiful, so little widespread danger to agriculture exists. In South Korea, rainfall was generally adequate for the rice crop, while temperatures stayed above normal.



AUSTRALIA: Nearly all wheat areas benefited from widespread shower activity across the southern portion of the continent. Weekly rainfall amounts generally ranged from 20 to 50 mm, with locally heavier amounts in more coastal areas of West Australia. Rainfall was light (less than 5 mm) in extreme northern New South Wales and crop areas of Queensland, however. Temperatures were conducive for some crop growth during the week. During this slow-growth period much of the crop should be tillering but early-seeded crops in northern crop areas may be in the stem elongation, or jointing, stage. Yield prospects continue to look good based on favorable weather for wheat growth.


SOUTH ASIA
TOTAL PRECIPITATION (mm)
(25 mm = 1 INCH)
July 27-Aug. 2, 1981
BASED ON PRELIMINARY REPORTS AND SATELLITE IMAGERY
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

SOUTH ASIA: Broad areas of northern India received above-normal rainfall. Flooding was reported in the east, but the moisture should benefit other parts, especially dryland crop areas. Lesser rainfall amounts in Bangladesh and northern Pakistan maintained adequate moisture for crop growth. The weather turned drier in western India and southern Pakistan, and flood-stricken areas in Rajasthan, India had a chance to dry out. Interior portions of southern India had a second consecutive week of generous rainfall, substantially improving crop prospects.


SOUTHEAST ASIA
TOTAL PRECIPITATION (mm)
(25 mm = 1 INCH)
July 27-Aug. 2, 1981
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
BASED ON PRELIMINARY REPORTS AND SATELLITE IMAGERY

SOUTHEAST ASIA: Monsoon activity produced significant weekly rainfall in northern Thailand, but amounts were more variable in southern portions of the country. Rainfall during this year's wet season has been generally near the seasonal average in most crop areas providing adequate moisture for crop growth. Early season corn should be reaching maturity while the main season rice crop continues vegetative development. Limited data suggests that western portions of Kampuchea received locally heavy rainfall during the week, providing ample moisture for rice paddies and corn fields which normally should be in late vegetative to reproductive stages.

Dry Hot Weather Affects Parts of USSR

by Ray McInturff and Mike Halpert
NOAA/USDA Joint Agricultural Weather Facility

Since July 17, a blocking ridge of high pressure (oriented approximately north to south) along the border between the European and Asiatic parts of the USSR has resulted in a buildup of hot dry conditions from the North Caucasus region up the Volga Valley to the area between Moscow and the Ural Mountains. Similar situations have characterized much of the summer of 1981, resulting in low rainfall and high temperatures in the eastern part of European USSR. Figures 1 and 2 for Kazan (located about 450 miles east of Moscow) illustrate the hot and dry conditions in this region.

The seriousness of the situation for spring-sown crops may be seen through the use of maps depicting vapor pressure deficit (v.p.d.). These conditions have stressed crops throughout the region during critical stages of their development. Maps of v.p.d. in mid-afternoon are being used to monitor the occurrence of hot and dry conditions.

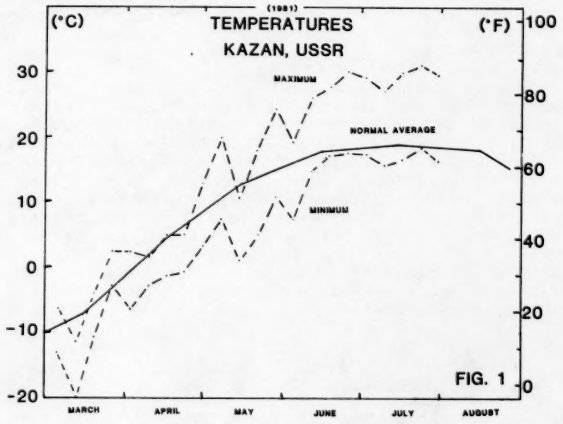
$$v.p.d. = e_s - e,$$

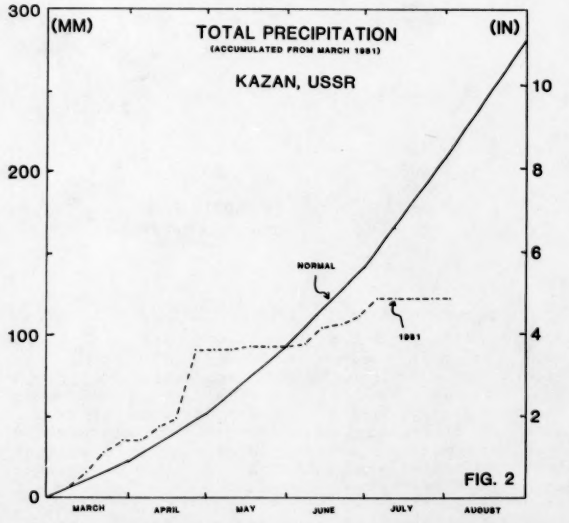
where e_s = saturation vapor pressure (a function of temperature, indicating the density of water vapor the atmosphere is capable of holding), and e = observed vapor pressure (a function of dew-point, indicating the density of water vapor the atmosphere actually contains). The v.p.d. partially expresses the drying power of the atmosphere on vegetation, and is an important factor in computing potential evapotranspiration in equations such as that of Penman.

Figure 3 shows the v.p.d. map for much of the USSR for July 30, 1981. Unshaded areas are those with v.p.d. less than 30 millibars (mb.). Stress to crops is in general proportional to v.p.d. All crops in areas shown here with v.p.d.'s in excess of 40 mb probably experienced some degree of stress, depending upon their moisture requirements and soil conditions.

Figure 4 shows the surface weather situation for July 30, 1981. The ridge of high pressure north of the Caspian Sea is fairly typical of the 1981 summer. The cold front crossing west to east across central European USSR is also fairly typical; it is weakening and slowing down as it approaches the high-pressure ridge, dumping most of its rainfall in the extreme west, and causing hot dry air to be advected ahead of it over the North Caucasus and Volga Valley and neighboring regions.

As of this writing (August 3), the passage of the front shown in figure 4 has provided some relief to eastern European USSR, but current upper-air charts suggest that the earlier situation conducive to stressing crops in this region may be re-established.





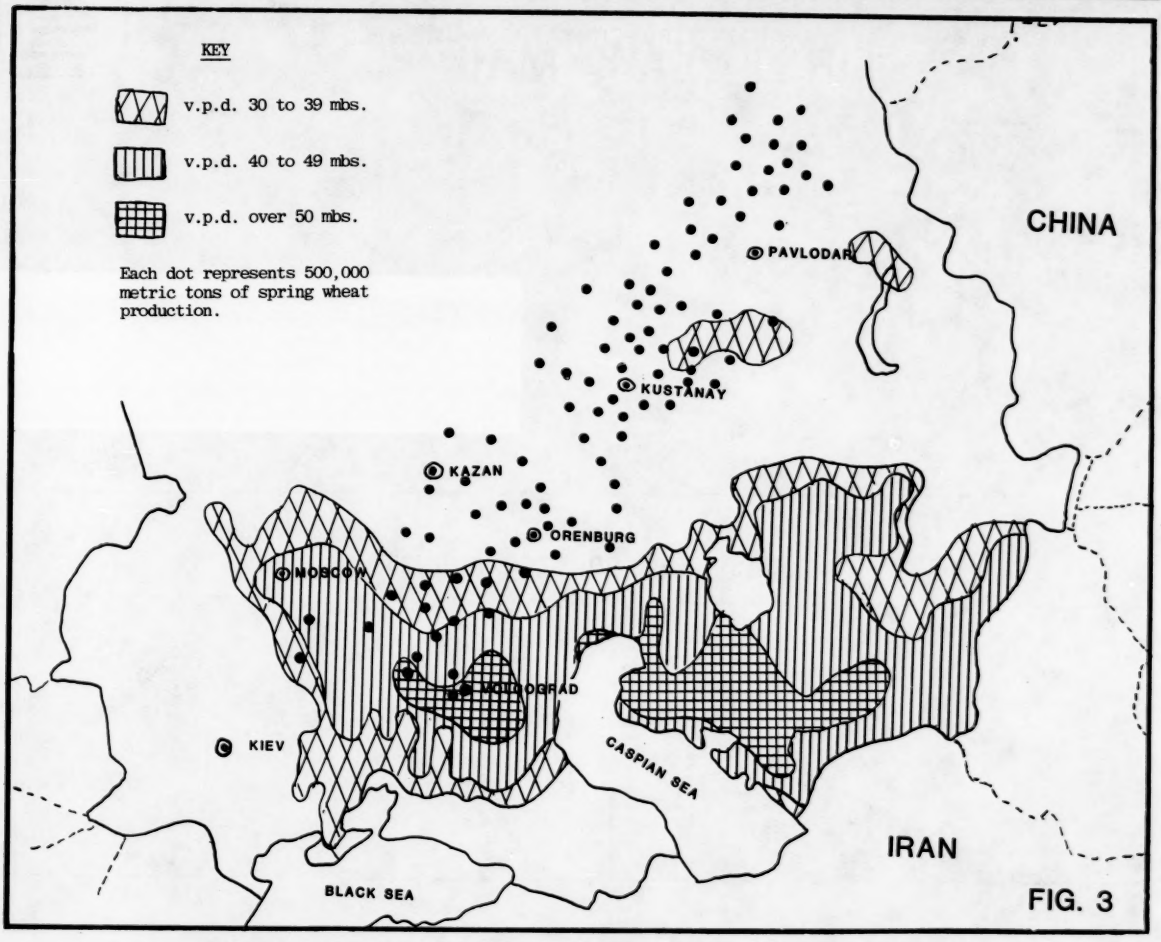
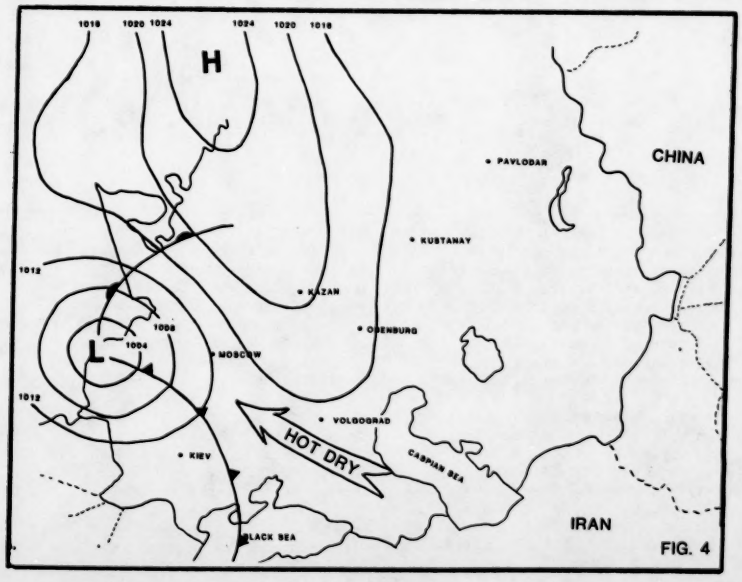

KEY
v.p.d. 30 to 39 mbs.
v.p.d. 40 to 49 mbs.
v.p.d. over 50 mbs.
Each dot represents 500,000 metric tons of spring wheat production.
CHINA
PAVLODAR
KUSTANAY
KAZAN
ORENBURG
MOSCOW
VOLGOGRAD
KIEV
CASPIAN SEA
IRAN
BLACK SEA

FIG. 3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KAZAN
ORENBURG
MOSCOW
VOLGOGRAD
HOT DRY
KIEV
CASPIAN SEA
IRAN
BLACK SEA

FIG. 4

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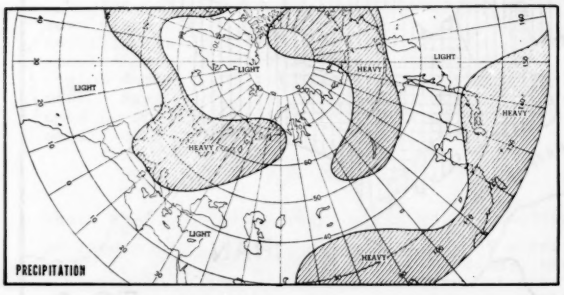

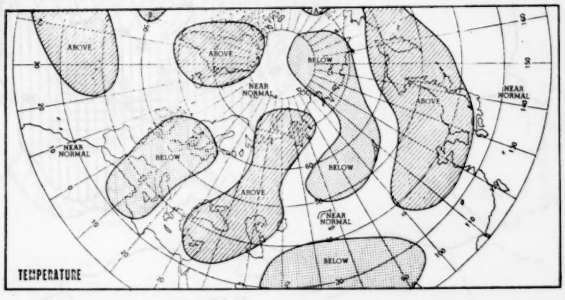

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